

Characteristics of Engineering Projects

Research Problem

- _____ The engineering problem described a practical need or problem to be solved.
- _____ The problem included criteria for the proposed solution & an explanation of restrictions

Design, Methodology& Data Collection

- _____ Prototype demonstrates the intended design
- _____ Prototype was tested in multiple conditions / trials
- _____ Prototype demonstrates engineering skill and understanding
- _____ Number of trials was large enough to support conclusions
- _____ Charts &/or graphs were accurate, clear, detailed, labeled, and included a 1 sentence summary caption
- _____ Appropriate analysis strategies (such as calculations or graphing) were used correctly

Conclusion included:

- _____ An answer supported with evidence (data) from this engineering research
- _____ A discussion of possible errors that may have occurred and how they may have impacted the data
- _____ New questions for future research
- _____ Connections made to the real world

Display

- _____ Display was complete & organized
- _____ Logbook was detailed, dated & complete (shows work from initial topic brainstorming through the conclusion)
- _____ Abstract described the purpose for the research, general procedures, a summary of results and major conclusion(s).

Interview (This occurs on Fair Day)

- _____ Researcher was able to answer the judges' questions with confidence
- _____ Researcher was able to use scientific vocabulary related to this engineering research

Here's a link to some helpful resources.

<https://www.sciencebuddies.org/science-fair-projects/engineering-design-process/engineering-design-process-steps#theengineeringdesignprocess>

We look forward to seeing you at the fair!