

LOUISVILLE REGIONAL SCIENCE &
ENGINEERING FAIR



LRSEF 2023-24

Project Guidelines

*ADAPTED FROM THE
2023 REGENERON GUIDELINES*

Project Presentation Template

Mathematics & Computer Science Project



LRSEF 2023-24 Project Presentation Template: Mathematics/Computer Science

Adapted from the 2023 Regeneron Guidelines

1) Project Title and Name

The following should be included:

- Project Title
- Name and Names of the members of your Team if this is a Team Project

2) INTRODUCTION - What is your research question?

- Explain what is known or has already been done in your research area. Include a brief review of relevant literature.
- **If this is a continuation project**, a brief summary of your prior work is appropriate here. Distinguish your previous work from this year's project.

3) FRAMEWORK - Notation and framework.

- Introduce the concepts and notation needed to specify your research question, methods, and results precisely.
- Define relevant terms and explain prior/background results. (Novel concepts developed as part of your project can be placed here or in Section 4.)

4) FINDINGS - Present your findings and supporting arguments.

- What did you discover or prove? Describe your result(s) in detail. If possible, provide both formal and intuitive/verbal explanations of each major finding.
- **Describe your methods in general terms. Then:**
 - Present rigorous proofs of the theory results – or, if the arguments are long, give sketches of the proofs that explain the main ideas.
 - For numerical/statistical results, include tables and figures that illustrate your data. Include relevant statistical analysis.
- Were any of your results statistically significant? How do you know this?

5) CONCLUSIONS - What is your assessment of your findings?

- How do the results address your research question? And how have you advanced our understanding relative to what was already known?
- Discuss possible limitations. Did any questions or problems arise that you were not expecting? What challenges do you foresee in extending your results further?
- What application(s), if any, do you see for your work?

6) REFERENCES

- **This section should not exceed one page.** Limit your list to the most important references.
- List the references/documentation used which were not of your own creation (i.e., books, journal articles).
- It is permissible to include a short statement acknowledging support from supervisors, research groups and others that had a direct role in your project.