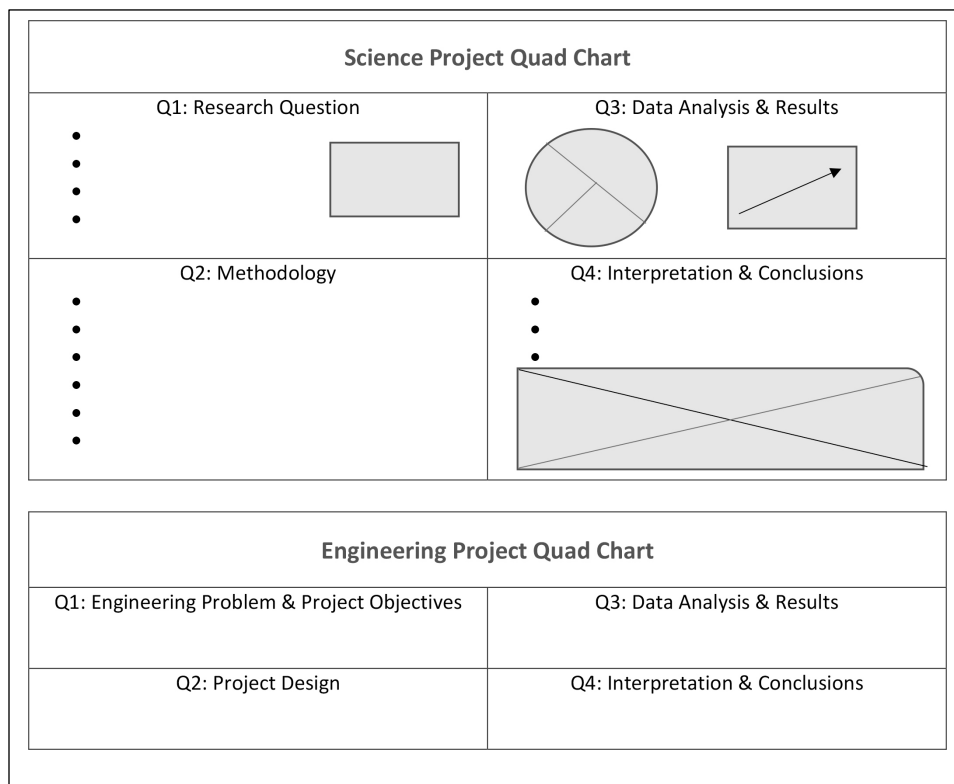


## Quad Chart Directions

The quad chart summarizes the project in a single page for a quick overview by the judges.

A “quad chart” is a single page divided into four quadrants providing a high-level summary of the project. It is intended to be more visual than detailed in order to quickly introduce your judges to what is important about your project. Follow the model below that corresponds to the Project Presentation template you selected.

1. You must use a page size no larger than standard 8½”X11”
2. The page background color must be white.
3. Text color must be predominantly black, but limited color for emphasis is acceptable.
4. The minimum allowable font size is 14 pt. *Exception:* You may use a smaller font size, down to 10 pt., for figure captions or photo credits.
5. All four quadrants of your Quad Chart should each be the same size with a single border line delimiting each, as in the examples below. The Title section should be only as tall as necessary to include your project title and other identifying information (see section on Quad Chart Title).
6. The Quad Chart should not include a bibliography, references, or acknowledgments.



### Quad Chart Title:

- In the upper right-hand corner, save space for your Project ID
- Line one is the title of your project
- Line two is your name, school, city, state

### Quadrant 1: Research Question/Engineering Goal

- Please state the research question or engineering problem being addressed (What are you trying to do and what has already been done?)
- A leading core graphic or visual is encouraged, but not required.

## Quadrant 2: Methodology/Project Design

- What did you do? What data did you collect and how did you collect that data? Discuss your control group and the variables you tested.
- DO NOT include a list of materials.  
**For Engineering Design:**
- What did you do? How did you design and produce your prototype? If there is a physical prototype, you may want to include pictures or designs of the prototype.
- If you tested the prototype, what were your testing procedures? What data did you collect and how did you collect that data? DO NOT include a list of materials.

## Quadrant 3: Data Analysis & Results

It is advised that this quadrant should primarily be a graphic representation of relevant data and results. Text should be kept to a minimum.

- Include tables and figures which illustrate your data.
- Include relevant statistical analysis of the data.
- What do these results mean? Compare your results with theories, published data, commonly held beliefs, and expected results.
- Discuss possible errors. Did any questions or problems arise that you were not expecting? How did the data vary between repeated observations of similar events? How were results affected by uncontrolled events?  
**For Engineering Design:**
- How did your prototype meet your engineering goal?
- If you tested the prototype, provide a summary of testing data tables and figures that illustrate your results.
- Include relevant statistical analysis of the data.
- What do these results mean? You may compare your results with theories, published data, commonly held beliefs, and/or expected results.
- Did any questions or problems arise that you were not expecting? Were these problems caused by uncontrolled events? How did you address these?
- How is your prototype an improvement or advancement over what is currently available?

## Quadrant 4: Interpretation & Conclusions

- What do these results mean in the context of the literature review and other work being done in your research area? How do the results address your research question? Do your results support your hypothesis?
- What application(s) do you see for your work?  
**For Engineering Design:**
- Did your project turn out as you expected?
- What application(s) do you see for your work?