

NCSEF 2024 Display Guidelines

NCSEF 2024 will be a hybrid event with virtual judging on March 20, 2024 and the in-person judging and the rest of the in-person event on March 23, 2024. However, **ALL finalists** are still required to complete Project Presentation Slides that will support the judging process. Projects are also required to provide a physical display board if they are participating in-person. All displays, virtual and in-person, will undergo Display & Safety (D&S) inspections. [The International Rules & Guidelines](#) remain the guide of what is eligible and allowable; all written materials are to be provided in English.

We strongly encourage finalists to use the same core materials in both displays to avoid duplication of effort and to support the D&S review. Where possible, infractions identified within the virtual display should be corrected and within the physical display board prior to printing or construction of the final physical display. These guidelines remain the same as those used in 2023.

NCSEF Registration “Materials for Judges”

I. Regeneron ISEF Paperwork as submitted in the Finalist Questionnaire

- a. This process remains the same as prior years and will be reviewed by the Scientific Review Committee (SRC) to confirm eligibility for competition.
- b. On display for the judges will be:
 - i. **Official Abstract** (250 words)
 - ii. **Regulated Research Institutional Setting Form 1C** (if applicable)
 - iii. **Continuation Form 7** (if applicable)

II. Project Presentation Slides

- a. The project presentation is the primary vehicle to present the content of your project and replaces the project poster for your **virtual** display. Appendix II provides complete instructions of the format requirements and recommendations.
- b. There are three suggested templates based on project type:
 - i. Science Projects,
 - ii. Engineering Projects and
 - iii. Mathematics/Computer Science Projects.
- c. Project presentations will be required to be uploaded into the Regional Fair and will then be locked for Display & Safety inspection prior to competition.

III. A Quad Chart **OPTIONAL** for most Regional Fairs and the State NCSEF – check with your Regional Director

- a. The quad chart summarizes the project in a single page for a quick overview by the judges.
- b. This representation of your project is intended to be only a summary and to be visual in nature.
- c. Appendix III provides complete instructions with format requirements and recommendations as well as sample templates.

IV. Additional Notes

- a. Active links are not permitted anywhere on the virtual display

- b. Do NOT include your research paper or notebook images as part of your Project Presentation Slides. These documents can be uploaded into the “NCSEF Materials for Judges”
- c. An optional 1-minute **demo** video is allowed, if applicable to your project.

In-Person Physical Display

Display & Safety

Please review the full text of the [Display & Safety rules in the International Rules & Guidelines](#) to ensure compliance with the display regulations including:

- Maximum size of the project
- Forms required to be displayed
- Photograph/Image Display Requirements and
- Items/materials not allowed on display or at your project booth.

The following information are suggested guidelines for your physical display taken from <https://guides.nyu.edu/posters>.

- Important information should be readable from about 10 feet away. The suggested smallest font on your physical poster is 18 pt.
- Title is short and draws interest.
- Word count of about 300 to 800 words.
- Text is clear and to the point.
- Use of bullets, numbering, and headlines make it easy to read.
- Effective use of graphics, color, and fonts.

Appendix I. Submission and Review Process

NCSEF Paperwork

Minimally, all projects must have [Checklist Forms 1](#), [Student Checklist Form 1A](#), [Approval Form 1B](#). OR the [Elementary EZ Form](#), and a Research Plan. The forms that are to be made available at your project booth for the judges to review are the Official Abstract, and if applicable, the [Regulated Research Setting Form 1C](#) and/or the [Continuation Form 7](#). These forms will be automatically passed over to ProjectBoard from Finalist Questionnaire. You will not be able to upload them directly on ProjectBoard.

Documents for the NCSEF “Materials for Judges”

- **NCSEF Official Abstract** approved by SRC (250-word format)
The abstract summarizes the information contained in the rest of this document. An abstract includes: (a) the research question or engineering problem, (b) procedures used, (c) data, (d) interpretation and (e) conclusions. It also may include any possible research applications. It should be limited to these essential elements.
- **Regulated Research Institutional Setting Form 1C** (if applicable)
This form is required for work done at a Regulated Research Institution or Industrial Setting and is to be completed after experimentation by the adult supervising. A Form 1C can also be used when support from mentors and those in a laboratory setting has been provided, even when the student received this support remotely. This can also include situations in which a high school teacher is supporting laboratory activities on behalf of a remote student to help clarify the student’s involvement in each step of the project.
- **Continuation Form 7** (if applicable)
Any project that is a continuation of a previous year’s work must document that additional research is new and different on Continuation Form 7.

Display & Safety

Display & Safety inspections will include a review of all submitted materials and enforcement of the display guidelines as published in the [International Rules and Guidelines](#). This includes meeting all of the format and size requirements, **providing appropriate credits for photographs, graphs and other visuals** and in having any permissions of individuals depicted in any project materials (on the board, slides or in the video) available.

Appendix II. Project Presentation Instructions

You may prepare your Project Presentation using any software tools that you desire, but the final document submitted for display to the judges and the public must satisfy the following requirements.

Format Requirements

1. You are limited to **no more than 12 pages**.
2. The pages should be created following the templates provided below. The page should be created in Landscape mode so that the entire page is visible at the same time.
3. Your pages must be without animation or active hyperlinks.
4. The page background color must be a light color and should not affect readability.
5. Text color must be predominantly dark to support readability.
6. All text should be easily readable when viewing the entire page at once. The smallest allowable font size of body text is 14 pt. and an 18 pt. font is recommended. *Exception:* You may use a smaller font size, down to 10 pt., for figure captions or photo credits.
7. All Project Presentation elements must conform to all [Display & Safety rules](#) as if placed on a physical poster for display to judges and the public. Passing a Display & Safety inspection will be required to compete. (Please see the highlight of Display & Safety Rules below.)

Format Recommendations:

1. Do not use non-standard fonts or colors to “stand out from the crowd” or to be entertaining. It is recommended that you use a font such as Arial, Calibri, Helvetica or Century Gothic.
2. Page titles should all be the same size. That size should be larger than headings within each page. In turn, headings should be larger than body text.
3. Avoid long expository paragraphs. State your points succinctly.
4. Use bullets to set out individual points of interest. Use numbered lists when the ordering of points of interest is important (e.g., instructions to be followed in order, or items needing a reference anchor for citation elsewhere in your Presentation).
5. All body text should adopt a common font style and size. Similarly, all heading text should adopt a common font style and size. There is no recommendation for the relation between body and heading styles.

Project Presentation Templates

Choose one of the following templates to create your presentation. Do not include information not specified in this template. If you are submitting a continuation project, include only information related to this year's research unless otherwise directed in the instructions below. You may include graphical elements as they would explain or illustrate your work and can be contained within the overall page limits.

Each of the required sections in each template must start on its own page and be in the order provided. Titles per section are provided as recommended titles, but alternate titles may be used. Each section may extend beyond one page as long as the total does not exceed 12 maximum pages.

TEMPLATE I: Science Projects

TEMPLATE II: Engineering Projects

TEMPLATE III: Mathematics/Computer Science Projects

Display & Safety Rules Highlight for Project Presentation Materials

(Please see [Display & Safety rules](#) for full text.)

Photograph/Image Display Requirements

- 1) Any photograph/visual image/chart/table/student-created logo and/or graph is allowed if:
 - a) It is not deemed offensive or inappropriate (which includes images/photographs showing invertebrate or vertebrate animals/humans in surgical, necrotizing or dissection situations) by the Scientific Review Committee, the Display & Safety Committee, or Society for Science
 - b) It has a credit line of origin ("Photograph taken by..." or "Image taken from..." or "Graph/Chart/Table taken from..."). If all images, etc. displayed were created by the finalist or are from the same source, one credit line prominently and vertically displayed on the backboard/poster or tabletop is sufficient.
 - **All images MUST BE properly cited.** This includes student-created logos, background graphics, photographs and/or visual depictions of the finalist or photographs and/or visual depictions of others.
 - All visual depictions of others require a signed photo/video release form is in a notebook or logbook at the project booth. These signed release forms must be available upon request during the set-up and inspection process but may not be displayed.
 - c) Sample release text: "I consent to the use of visual images (photos, videos, etc.) involving my participation/my child's participation in this research."
- 2) Finalists using any presentation or demonstration outside of a project board must be prepared to show the entire presentation to the Display & Safety Inspectors before the project is approved. All aforementioned rules apply to this presentation and the presentation may not be altered in any way after the final Display & Safety inspection. Examples of presentations that require approval include, but are not limited to PowerPoint, Prezi, Keynote, software program/simulation and other images and/or graphics displayed on a computer screen or other non-print delivery method.

NOT ALLOWED in your Presentation Materials

- 1) Any information on the project display or items that are self-promotions or external endorsements are not allowed in the project booth.
 - a) The use of commercial logos including known brands, institutional crests or trademarks, flags unless integral to the project and approved by the SRC via inclusion in the Official Abstract and Certification.
 - b) Any reference to an institution or mentor that supported the finalist's research except as provided in an acknowledgement section of the poster and within official ISEF paperwork, most notably Form 1C.
 - c) Any reference to patent status of the project.
 - d) Any items intended for distribution such as disks, CDs, flash drives, brochures, booklets, endorsements, giveaway items, business cards, printed materials or food items designed to be distributed to judges or the public.
- 2) Any awards or medals, except for past or present ISEF medals that may be worn by the finalist.
- 3) Postal addresses, World Wide Web, email and/or social media addresses, QR codes, telephone and/or fax numbers of a project or finalist. Note: The only personal information that is permissible to include on the display is the finalist name, school, city, state, country, age and grade.
- 4) Active Internet or email connections as part of displaying or operating the project at ISEF.
- 5) Any changes, modifications, or additions to projects including any attempt to uncover, replenish or return removed language or items after the approval by the Display & Safety Committee and the Scientific Review Committee has been received is prohibited.

Project Presentation Template: Science Project

1. Project ID and Title

- The following should be included:
 - Project ID. This ID will be provided by Society for Science upon submission of ISEF paperwork.
 - Project Title
 - Finalist Name (s)
 - School(s)
 - City, State, Province, Country

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 research is appropriate here. Be sure to distinguish your previous work from this year's project.
- What were you trying to find out? Include a description of your purpose, your research question, and/or your hypothesis.

3. METHODS - Explain your methodology and procedures for carrying out your project in detail.

- 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.

4. RESULTS - What were the result(s) of your project?

- Include tables and figures which illustrate your data.
- Include relevant statistical analysis of the data.

5. DISCUSSION - What is your interpretation of these results?

- 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?

6. CONCLUSIONS - What conclusions did you reach?

- 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?

7. REFERENCES/ACKNOWLEDGEMENTS

- 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.

Project Presentation Template: Engineering Project

1. Project ID and Title

- The following should be included:
 - Project ID. This ID will be provided by Society for Science upon submission of ISEF paperwork.
 - Project Title
 - Finalist Name (s)
 - School(s)
 - City, State, Province, Country

2. INTRODUCTION - What is your engineering problem and goal?

- What problem were you trying to solve? Include a description of your engineering goal.
- Explain what is known or has already been done to solve this problem, including work on which you may build. You may include a brief review of relevant literature.
- If this is a continuation project, a brief summary of your prior work is appropriate here. Be sure to distinguish your previous work from this year's project.

3. METHODS - Explain your methods and procedures for building your 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 separate list of materials.

4. RESULTS - What were the result(s) of your project?

- 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.

5. DISCUSSION - What is your interpretation of these results?

- 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?

6. CONCLUSIONS - What conclusions did you reach?

- Did your project turn out as you expected?
- What application(s) do you see for your work?

7. REFERENCES /ACKNOWLEDGEMENTS

- 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.

Project Presentation Template: **Mathematics/Computer Science**

1. Project ID and Title

- The following should be included:
 - Project ID. This ID will be provided by Society for Science upon submission of ISEF paperwork.
 - Project Title
 - Finalist Name (s)
 - School(s)
 - City, State, Province, Country

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. Be sure to 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 presented here or in Section 4, as appropriate.)

4. FINDINGS - Present your findings and supporting arguments.

- What did you discover and/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 /ACKNOWLEDGEMENTS

- 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.

Appendix III. Quad Chart Instructions – Optional for NCSEF and most Regional Fairs

A “quad chart” is a single page divided into four quadrants providing a high-level summary of the project. It is intended to be bulleted information that a judge could review at a quick glance and then proceed to the Project presentation for more details. Follow the model below that corresponds to the Project Presentation template you selected.

1. The page should be created so that **the entire page is visible at the same time**. The page should be created in Landscape mode.
2. The page background color should be a light color and text color predominantly dark to support readability.
3. The minimum allowable font size is 14 pt. and larger fonts are encouraged for readability. *Exception:* You may use a smaller font size, down to 10 pt., for figure captions or photo credits.
4. Text should be in list or bulleted form and as brief as possible. This chart is intended as a high-level summary that can be read **at-a-glance**.
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.
6. The Title section should be only tall enough to include the required elements which are the same as the abstract header. The project title should be at the largest header size of the document for easy identification of the project. (See section on Quad Chart Title).
7. The Quad Chart should include all appropriate photo credits, should not include a bibliography, references, or acknowledgments and must adhere to all Display & Safety rules.

Approximate examples of the format of a Quad Chart are listed below. Additional examples and a template will be posted to the Society for Science website.

Science Project Quad Chart Author, School, City, State, Country		Booth ID (if provided)	
Q1: Scientific Question - Bullet 1 - Bullet 2 - Bullet 3 Image credit	Q3: Data Analysis & Results - Bullet 1 - Bullet 2 Data Chart credit		
Q2: Methodology Image credit - Bullet 1 - Bullet 2 - Bullet 3 - Bullet 4	Q4: Interpretation & Conclusions - Bullet 1 - Bullet 2 - Bullet 3		

Engineering Project Quad Chart		Booth ID
Author, School, City, State, Country		(if provided)
Q1: Engineering Problem & Objectives	Q3: Data Analysis & Results	
Q2: Project Design	Q4: Interpretation & Conclusions	

Math/Computer Science Project Quad Chart		Booth ID
Author, School, City, State, Country		(if Provided)
Q1: Problem or Question	Q3: Findings	
Q2: Framework	Q4: Interpretation & Conclusions	

Quad Chart Title:

- In the upper right-hand corner, list the Project ID – if Provided.
- Line one is the title of your project.
- Line two is your name, school, city, state, country.

Quadrant 1: Research Question/Engineering Objectives

- This should reflect material in #2 of the Project Presentation Template.
- Please state the research question or engineering problem being addressed.
- A leading core graphic or visual is encouraged, but not required.

Quadrant 2: Methodology/Project Design

- This should reflect material in #3 of the Project Presentation Template.
- Please provide a succinct, bulleted summary of the methodology/project design.

Quadrant 3: Data Analysis & Results

- This should reflect material in #4 and #5 of the Project Presentation Template.
- It is advised that this quadrant should primarily be a graphic representation of relevant data and results.
- Text should be kept to a minimum.

Quadrant 4: Interpretation & Conclusions

- This should reflect material in #5 and # 6 of the Project Presentation Template