Regeneron ISEF 2022

ProjectBoard - Virtual Display Guidelines

Regeneron ISEF 2022 is planned as a hybrid event in which finalists will either compete in-person in Atlanta, Georgia at the Georgia World Congress Center (GWCC) or will compete virtually. In order to accommodate both modes of competition, **all finalists** are required to complete a virtual display within the ProjectBoard platform. Finalists that are in-person will also be required to provide a physical display board for the finalist exhibit hall in the GWCC. All displays will undergo Display & Safety inspection. The International Rules & Guidelines remain the guide of what is eligible and allowable; all written materials are to be provided in English.

REQUIRED Items:

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
   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 submitted by a set deadline and will then be locked for Display & Safety inspection prior to competition.

III. A Quad Chart
   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. Project Video (2-minute maximum)
   a. This video summarizes the project at a high level and will be used primarily for the public display of projects and should have the layman as the core audience.
   b. While judges will be given access to all materials submitted, it is advised that the video be a supplement to the project presentation slides.
   c. This video should feature the finalist(s) prominently on screen.

Additional OPTIONAL materials:

All judges will have access to these optional materials, just as they would at a finalists' booth, but it is advised that key information be provided in the required materials as outlined above and that these materials be considered supplemental.

1. ## Video Demonstration/Simulation/Animation (1 minute maximum)
   If a project is best explained by showing a demonstration, simulation or animation, you may include a short video. This video must meet all Display & Safety regulations.

2. ## Research Paper
   Regeneron ISEF does not require any project to include a research paper. However, many finalists have completed such a paper through the research process and would include it at their booth during an in-person fair. If you have prepared such a paper, you may upload it to share with judges, though judges are not required to review it.

3. ## Lab Notebook Image/Excerpt
   Regeneron ISEF does not require any project to submit a laboratory notebook. However, many finalists have this record of their research timeline and process and typically have it available at their booth. A student may upload a PDF of up to 4 pages of a lab notebook to provide evidence of its use, but it is strongly advised NOT to share the notebook in totality to protect your intellectual property.

Appendix I. Submission and Review Process

Regeneron ISEF Paperwork

All finalists must submit a finalist questionnaire that includes all of the ISEF paperwork required for their project. Minimally, all projects must have Checklist Forms 1, Student Checklist Form 1A, Project Plan/Summary and Approval Form 1B. The forms that are to be made available at your project booth for the judges to review are 1) 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.

- **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. Consider using the summary created by the Quad chart to inform this narrative.

- **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. In 2021-2022, when many Regulated Research Institution laboratories and facilities are closed to student researchers, the ISEF SRC has suggested that a Form 1C 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.

Calendar of Processes

The final timing of the Regeneron ISEF 2022 judging process is being developed with the intention that it will be between May 4 and May 10. The Regeneron ISEF 2022 event will occur the week of May 8-13. The following deadline dates attempt to provide the framework for the timing as we understand it currently. Look for updates on the Society website as plans are finalized.

- Deadline for original submission of paperwork: **12 days after your fair**
- Final deadline for submission of paperwork and abstract rewrites by all finalists: **April 11**
- Final submission of presentation materials on ProjectBoard: **April 18**
- SRC rolling phone/video conference Interviews**: Completed by April 22**
- Display & Safety inspections of presentation materials**: Completed by April 27**

Appendix II. Project Presentation Instructions

You may prepare your Project Presentation for Regeneron ISEF 2022 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. The Project Presentation must be uploaded to ProjectBoard as images (JPG, PNG or similar). Each page will need to be a separate image and you are limited to **no more than 12 pages**. *Tip: Powerpoint or Adobe Acrobat pages can be easily converted to separate images when content and formatting has been finalized.*

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 readable easily 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.

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Display & Safety Rules Highlight for Project Presentation Materials

(please see Display & Safety rules for full text.)

1) **Photographs, visual images, charts, tables, graphs must be appropriate and credited.**
   a) Any photograph/visual image/chart/table and/or graph is allowed if:
      i) 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.
      ii) 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 background graphics, photographs and/or visual depictions of the finalist or photographs and/or visual depictions of others for which 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.
2) **NOT ALLOWED in your Presentation Materials**
   a) Any information on the project display or items that are acknowledgments, self-promotions or external endorsements are NOT allowed in the project booth.
   b) The use of logos including known commercial brands, institutional crests or trademarks, flags unless integral to the project and approved by the SRC via inclusion in the Official Abstract and Certification.
      i) Personalized graphic/logos that are developed to indicate a commercial purpose or viability of an established or proposed business associated with the project. The only exception is a **student-created logo may be displayed at the project once. This is interpreted in ProjectBoard to be allowable to be displayed only once in the Quad Chart and once in the Presentation.**
      ii) Any reference to an institution or mentor that supported the finalist's research except as provided in the official ISEF paperwork, most notably Form 1C.
      iii) Any reference to patent status of the project.
      iv) Any items intended for distribution such as disks, CDs, flash drives, brochures, booklets, endorsements, give-away items, business cards, printed materials or food items designed to be distributed to judges or the public. Once again, handouts to judges and to the public are limited to UNALTERED photocopies of the official abstract and certification.
   c) A presentation may not have postal addresses, web addresses, email and/or social media addresses, QR codes, telephone and/or fax numbers of a project or finalist.

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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
TEMPLATEIII: Mathematics/Computer Science Projects

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**
   - 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).

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**
   - 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).

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**
   - 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).

Appendix III. Quad Chart Instructions

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 will have to upload as an image to ProjectBoard.

3. The page background color should be a light color and text color predominantly dark to support readability.

4. 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.

5. 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.

6. 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.

7. 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).

8. 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	Booth ID
Author, School, City, State, Country	

Q1: **Scientific Question**	Q3: **Data Analysis & Results**
• Bullet 1 • Bullet 2 • Bullet 3 [Image] credit	• Bullet 1 • Bullet 2 [Data Chart] credit
Q2: **Methodology** [Image] • Bullet 1 • Bullet 2 • Bullet 3 • Bullet 4 credit	Q4: **Interpretation & Conclusions** • Bullet 1 • Bullet 2 • Bullet 3

Engineering Project Quad Chart	Booth ID
Author, School, City, State, Country	

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	

Q1: Problem or Question	Q3: Findings
Q2: Framework	Q4: Interpretation & Conclusions

Quad Chart Title:

- In the upper right-hand corner, list the Project ID
- 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.

Appendix IV. Project Video Instructions

Record a video (maximum duration 2 minutes) explaining your project. The target audience for this video is members of the general public who will visit the fair on Public Day. While judges will have access to this video, it will not be the focus of their project review. This video must comply with all [Display & Safety Rules](#), particularly those involving logos, acknowledgements and properly crediting images/graphs/photos.

What to include in your video:

1. Introduce Yourself: State your full name and your city/state/country. Rather than reciting your project title, consider explaining your project in a single sentence.

2. **Explain Your Project:** Summarize your research into main points:
   a.   What did you do?
   b.   What did you find?
   c.   What conclusions did you draw?

To note:
- Videos can either be uploaded directly to ProjectBoard or you can embed a YouTube video. The YouTube link will need to be public, but it is not required that it be listed. It is recommended that the video be named the project short title.   If uploading directly, videos must be less than 500 MB in size.
- We encourage you to be prominently displayed in the video (as opposed to having the video be prominently your slides).
- You can use any props or visuals you may have that are within the Display & Safety guidelines.
   - *Tip: This video is a summary statement about your project and the scientific or engineering design process you followed; it is not intended as an advertisement or sales pitch.*
- Do not include anyone in your video other than the student researchers of the project.

Best Practices for Filming:

These videos will not be edited. To ensure your video is the best representation of your work, please keep these best practices in mind while filming:
- Please speak in English or provide English sub-titles.
- Film yourself in a well-lit and non-distracting environment so the viewer's focus stays on you and your work.
- For best results, film your video horizontally (landscape).
- Keep the camera still and in place during filming.
- Speak clearly and loudly enough that the recording is able to pick up every word you say.
- Avoid long pauses.
- Listen to your video after recording to ensure your voice is clear and audible, and that the video has not picked up too much background noise.
- Confirm the size of the video is less than 500 MB.