

# SCVSEFA HANDBOOK

## 2017 Rules & Guidelines

The Santa Clara Valley  
Science and Engineering Fair Association (SCVSEFA)

and

The Synopsys Silicon Valley Science and  
Technology Outreach Foundation (SOF)

present the

# Synopsys Silicon Valley Science and Technology Championship

Wednesday and Thursday

**March 22 & 23, 2017**

San Jose McEnergy Convention Center, **SOUTH HALL**  
San Jose, California

Submit applications to:  
**SCVSEFA**  
P.O. Box 307  
Los Altos  
CA 94023

Affiliated with the Intel<sup>®</sup> International Science and Engineering Fair

**Processing Fee:** A non-refundable handling fee (\$15 per student or \$30 per team, payable to SCVSEFA) must be submitted with the application. We reserve the right to limit the number of middle school entries based on teacher experience (see web site).

Mail forms to: SCVSEFA, P.O. Box 307, Los Altos, CA 94023.

## IMPORTANT DATES

See website -

<http://science-fair.org/students-parents/important-dates/> for times and location details for events.

## TEACHER WORKSHOPS and STUDENT CLINICS

Check our website

<https://science-fair.org/teacher-information-for-the-fair/teacher-workshop-and-student-clinic-schedule/> for Workshop & Clinic dates, times, and room locations. These are scheduled at the beginning of the school year.

**Comprehensive TEACHER WORKSHOP** at the Santa Clara County Office of Education, **Saturday Aug 27, 9AM-12PM**. Register with email to [src@science-fair.org](mailto:src@science-fair.org)  
**Breakfast provided**

## POSTMARK DEADLINES

Applications for early SRC preapproval:  
Oct 2, Oct 30, 2016

Applications requiring SRC preapproval:  
**Grades 6 -12 projects**  
Nov 23, 2016 (Wednesday) Final SRC

Applications NOT requiring SRC preapproval:  
January 26, 2017 (Thursday) FINAL

## SYNOPSIS CHAMPIONSHIP

### CHECK-IN DAY

March 22, 2017 (Wednesday)

- PROJECT CHECK-IN: NOON–6:00 PM  
PROJECTS MUST BE CHECKED IN ON MARCH 22

### JUDGING DAY

March 23, 2017 (Thursday)

- Judging: 1:30 PM–5:00 PM
- Public viewing of projects: 5:00–6:00 PM
- Project removal: 6:00 PM–6:30 PM  
PROJECTS MAY NOT BE REMOVED PRIOR TO 6:00 PM

## AWARDS CEREMONY

April 9, 2017

# Table of Contents

Important dates.....	11	Do I need SRC pre-approval? .....	5
Where can you turn for help?.....	2	Checklist for Required Preapproval Forms.....	6
Why should you participate? .....	3	Completing the Championship Application.....	7
Prizes and awards.....	3	Awards & Judging Criteria.....	8
Eligibility and Entry requisites.....	3	Project status .....	9
Project categories .....	3	Instructions on how to write a detailed Research Plan...10	
General rules .....	4	Deadlines & What's New.....	11
About safety .....	4	Project display rules .....	see website
Science Projects..... Step by Step .....	see website	Helpful hints for project displays . .....	see website
Engineering Projects... Step by Step .....	see website	Locations and maps .....	see website
		Final Abstract Form .....	download from website <a href="https://science-fair.org/rules-and-registration/forms/">https://science-fair.org/rules-and-registration/forms/</a>



## Where Can You Turn...

Start by visiting <http://www.science-fair.org>. Everything in this Handbook and MUCH MORE can be found on our web site . . .  
Select the Mentors Tab online to review our Mentors Program

### STUDENTS

*...for help getting started?*

*Attend a student clinic (see [www.science-fair.org](http://www.science-fair.org) for dates/locations)*

*...if you can't find a teacher to sponsor your project*

*E-mail: [fairmanager@science-fair.org](mailto:fairmanager@science-fair.org)*

*...for help with SRC requirements or forms?*

*E-mail: [src@science-fair.org](mailto:src@science-fair.org)*

*For Intel ISEF Rules and Guidelines see:*

*[www.societyforscience.org/isef/rulesandguidelines](http://www.societyforscience.org/isef/rulesandguidelines)*

### TEACHERS

*... for general Championship related questions*

*E-mail: [fairmanager@science-air.org](mailto:fairmanager@science-air.org)*

*...for help with SRC requirements*

*E-mail: [src@science-fair.org](mailto:src@science-fair.org) or forms?*

*...for additional funding?*

*Check out: [www.outreach-foundation.org](http://www.outreach-foundation.org)*

*...for help with student fees?*

*Email: [fairmanager@science-fair.org](mailto:fairmanager@science-fair.org)*

*...for mailing instructions?*

*See bottom of page 1 of this Handbook*

## Why Should You Participate?

Our hope for your participation is that you become captivated by the fun and challenge of doing a science or engineering project. A good project will certainly present a challenge and the benefits of overcoming those difficulties will last you for a lifetime. Students tell us that the scariest part of science fair is judging; they also tell us that talking to the judges was the very best part of the process. We hope you will make new friends who share your interests and that you gain insights into possible careers.

## Entry Requisites

Students are eligible if they attend grades 6 through 12 of any public-, private-, or home-school in Santa Clara County, and are less than age 20 on May 1, 2016.

Society for Science and the Public (SSP) Rules preclude participation in more than one Intel ISEF affiliated fair. Therefore successful application to the Synopsys Championship means that the student will not participate in other Intel ISEF affiliated fairs.

A student may enter only one project, either as an individual or a member of a team. Team projects may have two or three members (two recommended). All team members must qualify independently for Synopsys Championship eligibility. Individual and team projects will be judged using the same criteria.

The project may include no more than 12 months of continuous research and may not include research performed before January 2015.

Projects that are demonstrations, 'library' research or informational projects, 'explanation' models or kit building are not accepted for the Synopsys Championship.

A non-refundable handling fee (\$15 per student or \$30 per team payable to SCVSEFA) must be submitted with the application.

## Project Classification

Students select the scientific project Category and the best Field of Study for their project. An accurate choice of the Field of Study increases the likelihood that the project will be assigned to judges who understand and appreciate the project. A science project involves using the scientific method to validate a **hypothesis**. An engineering project has an engineering **goal** and involves design and construction of a novel object or process. For more information on Categories and Fields of Study go to <https://science-fair.org/rules-and-registration/project-categories/>

## Project Categories

Four Project Categories are used to classify the projects. Projects are divided based on (1) the amount of professional mentoring and access to non-school laboratories the student received, and (2) the subject matter of the project (Biological vs Physical science).

## RRI Projects (grades 9–12 only) are

Biological or physical science or engineering research projects conducted under the guidance of professional research staff from 1) A Regulated Research Institution (Government regulations for institution's use of animals in accordance with rules of IACUC or Good Laboratory Practice,(GLP), etc.), 2) A professional research staff at a company or government lab, 3) With advice and guidance of a professional research scientist or engineer, 4) Mentors, other than teachers, who provide substantial guidance, data or sophisticated equipment not available in schools.

Judges will use Form 1C to figure out student contribution to the research. Note: Middle school projects for grades 6-8 may NOT be conducted in the facilities of a RRI.

## Non-RRI Projects (all grades 6–12 ) include

all projects from grades 6 through 8 and projects from grades 9 through 12 NOT mentored by a professional research scientist/engineer or paid mentor.

## Fields of Study

Students must choose a field of study from the list below which best matches the content of their project. Details for these fields of study may be found on the website at <https://science-fair.org/rules-and-registration/project-categories/>

### BIOLOGICAL SCIENCES AND ENGINEERING

- \*Behavioral Science
- \*Plant Science
- \*Animal Science
- \*Biochemistry/Microbiology
- \*Earth and Environmental Science
- \*Computational Biology and Bioinformatics (HS only)
- \*Biomedical and Health Science
- \*Biomedical Engineering

### PHYSICAL SCIENCES AND ENGINEERING

- \*Chemistry
- \*Chemical and Environmental Engineering
- \*Physics and Astronomy
- \*Electrical Engineering
- \*Mechanical Engineering
- \*Mathematics
- \*Software Engineering

## Prizes and Awards

- All participating students receive a Championship pin and Certificate of Participation on Check-In Day of the fair.
- Category Awards for 1<sup>st</sup> place, 2<sup>nd</sup> place, or Honorable Mention (Ribbons) are awarded by SCVSEFA for scientific merit.
- Outstanding projects in the Senior Division (grades 9-12) win Grand Prize Awards and an all-expense-paid trip to the Intel International Science and Engineering Fair, May 14-19, 2017, in Los Angeles, CA.
- Outstanding projects in the Junior Division (grades 6-8) receive the Isabelle Stone Award (biological sciences) or the Castro Family Award (physical sciences) and are eligible for an all-expense- paid trip to the California State Science Fair in Los Angeles, CA. April 24-5, 2017. See CSSF website [www.usc.edu/CSSF/](http://www.usc.edu/CSSF/) for more information. An additional 85+ top projects (grades 6-12) win eligibility to attend CSSF.
- Selected winners in the Junior Division are eligible to further compete in the Broadcom MASTERS Competition. Oct, 2017 in Washington, DC.
- Two projects in the Senior Division will be selected to be eligible to participate in the I-SWEEP Olympiad. May 3-7, 2017 in Houston, TX.
- In addition, 60+ companies and organizations present Special Awards based on their own criteria.

## General Rules

1. The Synopsys Championship is an Intel ISEF affiliated fair. We follow the Intel ISEF Rules and Guidelines and expect all students to read and abide by the following ethics statement: *“Scientific fraud and misconduct are not condoned at any level of research or competition. Such practices include plagiarism, forgery, use or presentation of other researcher’s work as one’s own, and fabrication of data. Fraudulent projects will fail to qualify for competition in affiliated fairs or the ISEF.”*
2. The fair Application can be downloaded from our website, [www.science-fair.org](http://www.science-fair.org). We require the application be submitted by the student’s teacher in its entirety as a single stapled document in page number order, with all required extra forms stapled behind the completed 8-page Application, and the Detailed Research Plan.
3. Projects requiring SRC (Scientific Review Committee) preapproval before beginning experimentation must be submitted by the appropriate deadlines. Our only deviation from the Intel ISEF Rules is that, for safety reasons, we request that projects involving hazardous chemicals, activities, devices or regulated substances also seek preapproval. See pages 6-7 of this handbook for guidance.
4. Additional forms are required for all projects requiring SRC preapproval. The checklist on Page 6 provides details. These forms may be downloaded from our web site [www.science-fair.org](http://www.science-fair.org).
5. Both our web site and the Intel ISEF web site: <http://www.societyforscience.org/isef/> have significant amounts of additional and very useful information.
6. A copy of the project Minimum Quality Standards can be obtained from page 6A & 6B of the Application or Handbook page of our website. ***Please adhere to these standards or the project will fail to qualify for competition.***
7. All additional forms should be submitted by the teacher along with the Application in a single document (in Application page order). The Adult Sponsor Checklist (Form1 on page 4 of the Application) should be used to ensure that the Application is complete.
8. Projects that are a continuation of a previous year’s research require SRC preapproval. These Projects must involve significant *new* work and additional paperwork is required (see Form 1A of the Application form). Only the current year’s research may be on the project board. Submit Form 7.
9. Projects must comply with all local, state and federal laws in addition to SCVSEFA and Intel ISEF Rules. We reserve the right to fail to qualify the project of any student who does not follow these rules.
10. For the 2017 Synopsys Championship the research work has to be done between Jan 1, 2016 and March 21, 2017 (with no more than 12 months total time).
11. All MIDDLE SCHOOL projects must be done in the school, home, or field. No projects will be admitted for work done in a research institution.
12. HIGH SCHOOL projects may be done in a Regulated Research Institution (RRI) such as a university, college, or professional research institution, provided all rules regarding their use are followed. High school students should list their sponsoring high school teacher as the Teacher/Adult Sponsor page 1 of the Application. The RRI project supervisor should be listed as the mentor or qualified scientist.
13. Parent sponsored projects (PSP) at high schools which have a participating teacher are not permitted.

## About Safety

Some science experiments and engineering projects are inherently dangerous. The SRC (Scientific Review Committee) review process is designed to protect the students, their peers and families, and the environment.

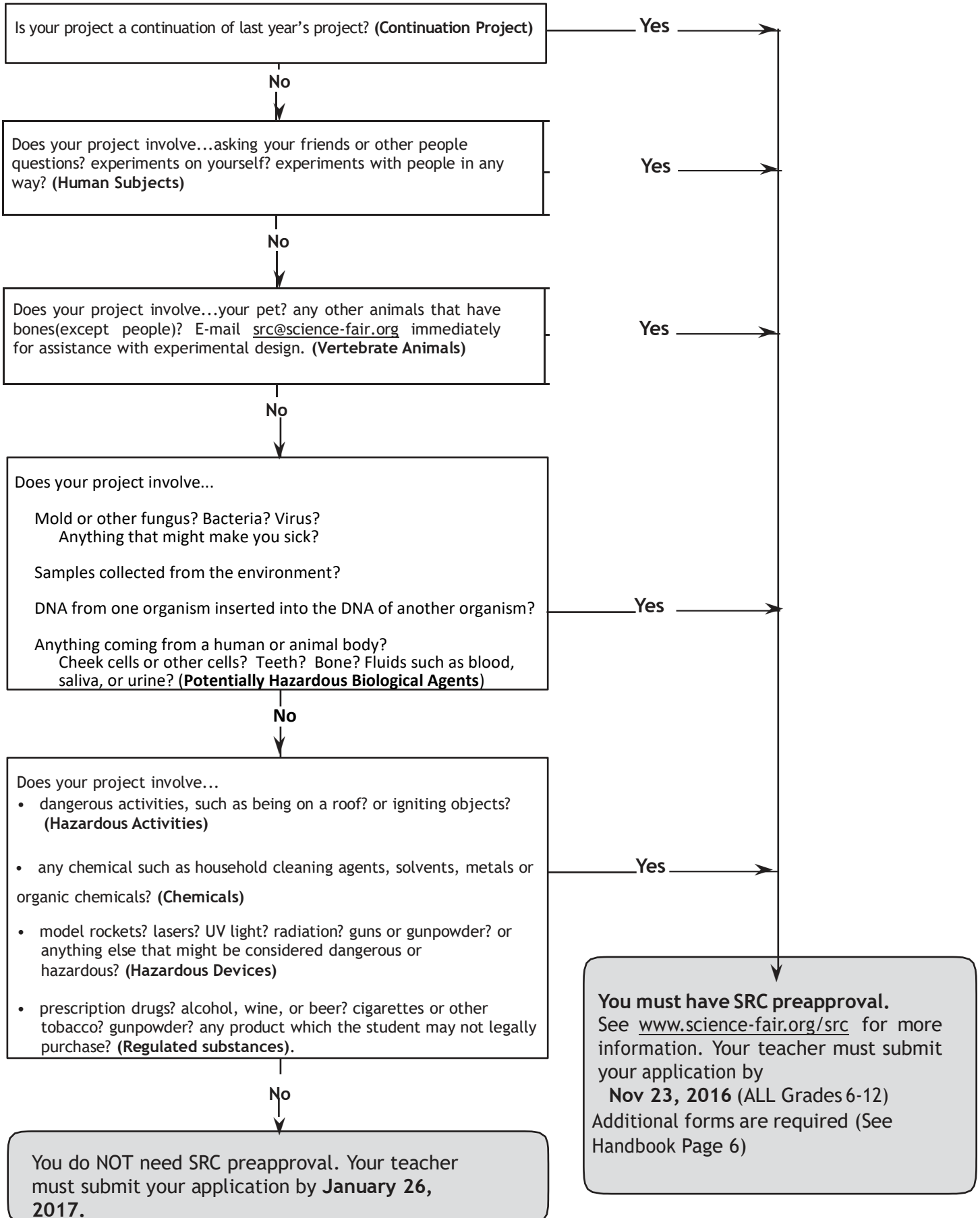
If any boxes listed under 4) or 6) are checked on the Adult Sponsor Checklist (Form 1), the project will need a **Designated Supervisor (DS)**. This person must have training in the field and understand the complexities of the research plan so that he or she is able to complete the risk assessment on Form 3. The DS commits to provide direct supervision.

A **Qualified Scientist (QS)** is a PhD level scientist (or MS with 5 years of training in the field) with expertise in the area of study. The QS is required for all BSL-2 studies or studies using DEA-controlled chemicals and for other projects as specified by Intel ISEF Rules.



# Do I Need SRC Preapproval Before I Can Begin My Project?

*Some projects may be covered by the rules for more than one category*



## Checklist for Required Championship Forms

Project Content	Projects not Requiring SRC Preapproval	Human Participants (including surveys)	Vertebrate Animal Projects	Potentially Hazardous Biological Agents, (pathogens, rDNA or Human/Animal Tissues)	Hazardous Chemicals, Dangerous Activities, Devices or DEA Regulated Substances
Application Form	Yes	Yes - and a copy of ANY surveys, photographs	Yes	Yes	Yes
Registered Research Institutional / Industrial Setting Form (1C)	See note 1	See note 1	See note 1	See note 1	See note 1
Qualified Scientist Form (2)		See note 2	Yes See note 3	Yes See notes 4, 5	Yes – if using DEA controlled substances
Risk Assessment Form (3)			Yes See note 9		Yes See note 6
Human Participants Form (4)		Yes See note 8		Yes - for Human Tissue, see note 8	
Vertebrate Animals Form (5A or 5B)			Yes See note 3		
Potentially Hazardous Biological Agents Form (6A)				Yes  See: <a href="http://www.societyforscience.org/page.aspx?pid=319">http://www.societyforscience.org/page.aspx?pid=319</a>	
Human and Vertebrate Animal Tissue Form (6B)				Yes - for Human and Animal Tissue only	
Continuation Project Form 7	See note 7	See note 7	See note 7	See note 7	See note 7

Forms and expanded information and all Intel ISEF Rules and Regulations for each of these project types may be found at <https://student.societyforscience.org/forms>

- 1) If work was conducted or equipment used at an institutional or industrial setting at any time, a Registered Research Institutional/Industrial Setting Form (1C) must be completed following the end of experimentation, shown at check-in, and displayed with the project.
- 2) An Institutional Review Board (IRB) must review all human subjects projects for risk assessment and approval BEFORE experimentation begins. If the IRB determines the project involves more than a minimal risk to the human subjects, then a Qualified Scientist will need to oversee the project and complete the Qualified Scientist Form (2).
- 3) Not required for observational studies involving animals in their natural environment or animals in zoological parks with no manipulation of their environment or interaction between the experimenter and the subject animal(s).
- 4) rDNA studies must be supervised by a Qualified Scientist or Designated Supervisor with relevant expertise.
- 5) Qualified Scientist Form (2) is required for studies handling BSL-2 organisms, human and animal tissues or rDNA. Special rules apply for unknown microorganisms isolated from the environment. See ISEF Rules & Guidelines.
- 6) These projects require a qualified Designated Supervisor and completed Form (3).
- 7) Continuation projects require Continuation Form (7) which must be displayed with the project.
- 8) Also requires a sample of the Informed Consent Form.
- 9) If project is a Vertebrate Animal Decomposition Study.



# Completing the Championship Application Forms

The following procedures will help ensure that all applications are complete when submitted and can be reviewed by the SRC (Scientific Review committee) in a timely manner.

## Teacher Involvement

- Championship applications can only be submitted by teachers. Deadlines are listed on page 11 of this Handbook. Please add the submission check made out to SCVSEFA with the student's name in the note line.
- If no teacher is available to submit the forms, please email: [fairmanager@science-fair.org](mailto:fairmanager@science-fair.org).

## 2017 Application Forms

- The 8-page Application Form and Detailed Research Plan MUST be completed online at [www.science-fair.org/rules-and-registration/online-application/](http://www.science-fair.org/rules-and-registration/online-application/) and submitted by the teacher as one document stapled together in page number order. All additional forms must be attached after the 8-page application.
- All fields must be completed unless otherwise indicated.
- Each team member must submit a separate, signed Form (1B), and application Consent forms on pp 7-8.
- Additional Forms not included in the Application itself can be downloaded using the Forms link on the website 'Application Instructions' page.

## STUDENT CHECKLIST (page 2) Student

All fields should be completed.

**Item 4.** Your teacher is usually your adult sponsor.

**Item 5.** If you are continuing work on a project you entered last year, check the box and include a copy of your previous year's Abstract and complete Continuation Form (7). Only this year's work may be displayed on your project board.

**Item 6.** If your project requires SRC preapproval, write the words "upon approval" in the space for "start date" and leave a blank for "end date." If your project does not require SRC preapproval, you can designate your own start date. (Leave the actual start and end dates blank unless you have completed your project and can get those dates from your notebook.)

**Item 7.** Indicate where the experiment will be done. Include names, addresses, and phone numbers of *all* locations.

## Required RESEARCH PLAN Attachment

The four types of Detailed Research Plans are located at <https://science-fair.org/rules-and-registration/forms/>. Complete/address all sections of the appropriate plan. Include the details of your experiment or engineering project and insert behind page 3 in your Application Form. Follow the minimum quality standards (use page 6A or 6B of the Application Form for reference). Incomplete forms cause delays in approval.

## ADULT CHECKLIST (page 4) Teacher

First read page 5 of this Handbook to determine if SRC preapproval is needed. Then check the appropriate boxes on Form 1 (see Application page 4). If you check any boxes under 4) or 6), additional forms are required. To determine which ones are needed, consult the table on page 6 of the handbook. All forms must be signed and dated by the adult sponsor/teacher *prior* to experimentation.

### • Human Participant Projects

Projects involving human subjects ((even if only answering questions), require IRB preapproval. Form 4 is required. Students and teachers should fill out only the top one third of Form 4. Detailed Research Plan forms are located at <https://science-fair.org/rules-and-registration/forms/>. It is particularly important that a completed Form 4 with accompanying Informed Human Consent Form, Detailed Research Plan, and all required items (surveys, photos, music CD, etc.) be included with the application. After IRB approval, a copy of the signed form will be returned to the teacher for the student to use when recruiting participants.

### • Vertebrate Animal Projects

If the project involves animals with bones, students should fill out either Form 5A or 5B. Contact [src@science-fair.org](mailto:src@science-fair.org) and we will put you in contact with our veterinarian who will guide the student through the process.

### • Potentially Hazardous Biological Agents

Projects involving bacteria, fungi, viruses, tissues, biological fluids, organs, etc. may never be done at home. Fill out Form 6A, and Form 6B and Form 2 if required. This project area is complicated so refer to the ISEF Rules at <https://student.societyforscience.org/potentially-hazardous-biological-agents>. Some items are exempt: Brewer's yeast, cut hair, pasteurized meat and eggs.

### • Hazardous Chemicals, Activities and Devices

This is a broad topic area involving chemicals, tobacco, alcohol, drugs, radiation, fire, rockets, motorized vehicles, etc. We request that you obtain preapproval as the most dangerous projects are often in this category. The designated supervisor must complete Form 3 (Risk Assessment) and answer questions in detail.

## STUDENT Responsibilities

- You must obtain PRE-approval for all the types of projects listed above. To do this, all the appropriate additional forms should be filed with the 8-page Application form and Detailed Research Plan. If you need help to fill out the forms, send a note to [src@science-fair.org](mailto:src@science-fair.org). Correctly completed forms speed the approval process.
- Monitor the web site for the 'status' of your project (details on page 9).

## High School Research done at a Regulated Institute (RRI) or Industrial Research Setting

Rules for RRI use may be found at <https://science-fair.org/rules-and-registration/registered-research-institution-use/>. Preapproval needs to be given by the Institute's SRC/IRB/IACUC committee when required. All required forms (or Institute's equivalent) must be filled out, signed and dated *prior to start of experimentation*.

Students should have the PI or a Senior Researcher in the Lab fill out Form 1C at the end of experimentation.

## Minimum Quality Standards

The minimum quality standards for the 4 acceptable project types can be found on page 6A & 6B of the Supplemental Application Form. Remember that these are minimum standards and winning projects are likely to be more complex.

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# Championship Project Judging Criteria

## Category Awards

Category awards are given in each of 4 categories to those projects selected by judging teams for 1<sup>st</sup> place, 2<sup>nd</sup> place, and Honorable Mention. About 30% of projects receive a Category Award.

Projects are judged by a team of judges in groups of about 8 to 12 with projects from similar fields of study. Non RRI projects are judged by grade and category. RRI projects (grades 9 to 12 only) are judged by category only. (Category judging in the California State Science Fair (CSSF) and Intel International Science and Engineering Fair (ISEF) is also not done by grade). Projects are judged according to the criteria listed at the right. At least two judges evaluate each project.

### Category Award Judging Criteria

	Maximum Points
<b>Scientific Thought or Engineering Goals</b>	<b>10</b>
Did you follow the scientific method or engineering design process?	
<b>Creative Ability</b>	<b>10</b>
Do you have a unique and original problem or solution, or have you used a novel approach?	
<b>Thoroughness</b>	<b>5</b>
Did you find out what others have done on your subject? Did you look at different aspects of the problem?	
Are your interpretations and decisions supported with data?	
<b>Skill</b>	<b>5</b>
Do you understand the subject?	
Did you use appropriate laboratory, computational, observational, research and design skills?	
Did you acknowledge the help you received?	
<b>Clarity</b>	<b>3</b>
Are your abstract and presentation accurate and understandable? Did you present your data using appropriate statistics, graphs, drawings, etc?	
<b>TOTAL</b>	<b>33</b>

## Special Awards

More than 60 companies and organizations select projects to receive Special Awards at the Championship. These awards may include cash, tours, and/or tangible items. Judging for Special Awards is based upon the objectives of the participating company or organization. The Special Awards judges only review projects whose titles fit their criteria of interest. Therefore, **students should choose project titles which tell judges what the project involves from the title information alone.**



## Tracking the Status of Your Project

When you have submitted your project to SCVSEFA, it is then *your responsibility* to track its status on the SCVSEFA web site. Use the 'Project Status' link on the STUDENT or TEACHER page to find your project and its assigned Project Number. Projects are listed according to your school and teacher. Project status should be listed on the web site about 7-10 days following the deadline or an earlier mail submission. If you cannot find your project within 2 weeks of submission, please contact us (see page 2). After review for quality and need for SRC pre-approval, your project status will be updated on the website. An e-mail note will have been sent to the teacher and/or student with the project number in the subject line along with a message). You may start the experimental part of your project as soon as your project is marked '**Approved**' on the web site.

Status on www.science-fair.org	Message Meaning
<b>project received</b>	Project has been received and registered online. Be patient while projects are being reviewed, Check back in 7 days for a status update.
<b>project accepted</b>	everything is fine. Begin your research
<b>awaiting SRC review</b>	in queue for review, continue to monitor the web site
<b>project failed to qualify</b>	given for major safety hazards or rules violations that cannot be corrected
<b>project incomplete – see your teacher</b>	If you find this note, contact your teacher to find out what is wrong. Revisions which are needed for project acceptance will be stated in the message along with your specific project ID number.
	If the message is " <b>quality issues</b> ", check your procedures against the Minimum Quality Standards listed on the application form and on the web site. <b>Resubmit your improved procedures</b> as an e-mail reply to the note sent by the Scientific Review Committee
	If the message is " <b>Forms Violation</b> ", the note will specify the missing/incomplete forms needed. Continue to monitor the status of your project after you <b>submit the requested forms</b> until the project status is listed as "Accepted" on the web site.

If your project has been reviewed, and the status is not 'Project Accepted' on our website, you need to be working with your teacher to be sure you make an email response to the SRC in a timely manner with corrections to the application.

# Research Plan Instructions (following Intel ISEF rules)

## A complete research plan is required and must accompany Checklist for Student (1A)

Detailed Research Plans are located at <https://science-fair.org/rules-and-registration/forms/>

1. The Research Plan is a succinct detailing of the rationale, research question(s), methodology, and risk assessment of your research project and should be completed before experimentation. For all projects requiring preapproval, this document must be reviewed and approved by the appropriate approval committee (e.g. IRB, IACUC, SRC) before experimentation. ALL changes made to the original plan should be added to the final document as part of the Post Project Summary. For projects not requiring preapproval, this document may be completed either pre- or post-experimentation.
2. All projects should complete a Post Project Summary after experimentation.

The Research Plan and Post Project Summary should include the following::

- a. What is the **RATIONALE** for your project? Include a brief synopsis of the background that supports your research problem and explain why this research is important scientifically and if applicable, explain any societal impact of your research.
- b. State your **HYPOTHESIS(ES), RESEARCH QUESTION(S), ENGINEERING GOAL(S), EXPECTED OUTCOMES**. How is this based on the rationale described above?
- c. Describe the following in detail:
  - **Procedures:** Detail all procedures and experimental design including methods for data collection. Describe only your project. Do not include work done by mentor or others.
  - **Risk and Safety:** Identify any potential risks and safety precautions needed.
  - **Data Analysis:** Describe the procedures you will use to analyze the data/results that answer research questions or hypotheses.
  - **Discussion of Results and Conclusions:** Discuss the data/results and the conclusions that can be drawn.
- d. **Bibliography:** List at least five (5) major references (e.g. science journal articles, books, internet sites) from your literature review. If you plan to use vertebrate animals, one of these references must be an animal care reference.

Items 1–4 below are subject-specific guidelines for additional items to be included in your research plan/project summary as applicable.

### 1. Human participants research:

- **Participants.** Describe who will participate in your study (age range, gender, racial/ethnic composition). Identify any vulnerable populations (minors, pregnant women, prisoners, mentally disabled or economically disadvantaged).
- **Recruitment.** Where will you find your participants? How will they be invited to participate?
- **Methods.** What will participants be asked to do? Will you use any surveys, questionnaires or tests? What is the frequency and length of time involved for each subject?
- **Risk Assessment.** What are the risks or potential discomforts (physical, psychological, time involved, social, legal, etc.) to participants? How will you minimize the risks?
- **Benefits.** List any benefits to society or each participant.
- **Protection of Privacy.** Will any identifiable information (e.g., names, telephone numbers, birth dates, email addresses) be collected? Will data be confidential or anonymous? If anonymous, describe how the data will be collected anonymously. If not anonymous, what procedures are in place for safeguarding confidentiality? Where will the data be stored? Who will have access to the data? What will you do with the data at the end of the study?
- **Informed Consent Process.** Describe how you will inform participants about the purpose of the study, what they will be asked to do, that their participation is voluntary and they have the right to stop at any time.

### 2. Vertebrate animal research:

- Briefly discuss potential **ALTERNATIVES** to vertebrate animal use and present a detailed justification for use of vertebrate animals
- Explain potential impact or contribution this research may have
- Detail all procedures to be used
  - Include methods used to minimize potential discomfort, distress, pain and injury to the animals during the course of experimentation
  - Detailed chemical concentrations and drug dosages
- Detail animal numbers, species, strain, sex, age, source, etc.
  - Include justification of the numbers planned for the research
- Describe housing and oversight of daily care
- Discuss disposition of the animals at the termination of the study

### 3. Potentially hazardous biological agents research:

- Describe Biosafety Level Assessment process and resultant BSL determination
- Give source of agent, source of specific cell line, etc.
- Detail safety precautions
- Discuss methods of disposal

### 4. Hazardous chemicals, activities & devices:

- Describe Risk Assessment process and results
- Detail chemical concentrations and drug dosages
- Describe safety precautions and procedures to minimize risk
- **Discuss methods of disposal**

## SYNOPSIS CHAMPIONSHIP APPLICATION DEADLINES

<b>Projects</b>	<b>US MAIL Postmark Deadline</b> (projects may be hand delivered until 2 days prior to the committee meeting dates)	<b>SRC Review Meeting</b> (Safety / Scientific Review)	<b>Institutional Review Board Meeting</b> (Human subjects studies) **
Projects from any grade requesting EARLY PRE-APPROVAL	<b>Oct 2, 2016</b> (hand delivered by Oct 6)	Oct 8	Oct 8
Projects from any grade requesting EARLY PRE-APPROVAL	<b>Oct 30, 2016</b> (hand delivered by Nov 5)	Nov 5	Nov 5
<b>All Middle &amp; High School Projects</b> requiring PRE-APPROVAL	<b>Nov 23, 2016</b> (hand delivered by Nov 30) see address below	Dec 3	Dec 3
<b>All Projects NOT requiring PRE-APPROVAL</b>	<b>Jan 22, 2016</b> (hand delivered by Feb 1) see address below	Feb 4 Projects reviewed for quality	<b>NONE</b>

\*\* The IRB committee (which reviews projects involving human subjects) only meets on the 3 dates indicated above. **All projects requiring preapproval submitted after the Nov 23, 2016 postmark deadline will NOT be accepted.**

Applications needing preapproval can be submitted at any time prior to the final deadlines for the project type, but will only be reviewed on the dates indicated above (dates the Scientific Review Committee is scheduled to meet).

Applications may be hand delivered to 2321 Harvard St in Palo Alto, 94306. Please put the application in the drop-off box on the front porch. No need to knock at the door, as box is frequently checked.

## CHANGES FROM LAST YEAR'S RULES

1. Earlier SRC postmark deadline dates. Applications to the Synopsis Championship which require SRC pre-approval must be submitted with a postmark deadline of Nov 23, or the Nov 30 hand delivery deadline of 6pm.
2. No human studies (involving survey or direct human participation) will be accepted after the Nov 23 postmark deadline or Nov 30 hand delivery deadline.
3. Several different SRC reviewers will be sending out email notes to teachers/students whose applications need further attention. Please respond by email to the specific *Sender* of the SRC email which you receive.
4. Expanded definition of RRI (see website).
5. New Middle school limits (30 projects/school)
6. New SSP forms for some projects

## NOT CHANGED FROM LAST YEAR'S RULES

1. 4 Scientific categories, 15 fields of study
2. Biomedical engineering moved to Biological Sciences.

