

NCSEF Grade 3-8 Research Plan and Approval Form Directions

NCSEF uses the Rules and Regulations of the International Science and Engineering Fair (ISEF) found at <http://www.societyforscience.org/isef/rulesandguidelines>.

1. All students must complete a **research plan** (see directions following) and **attach** it to the approval form prior to beginning their project.
2. **The research plan and this form must be approved by the local fair Scientific Review Committee before beginning the project!** (A local fair may choose to allow the teacher to pre-approve projects that do not involve any of the items listed in #5.
3. Grades 3-8 students must use this form or the official ISEF Forms (1,1A, and 1B) to participate in NC Regional and State Science Fairs. High School students **MUST** use the ISEF Forms.
4. Students may work in teams (3 students is the maximum). If the project is done by a team then:
 - a. Each student needs to fill out and attach the information form with the required parent or guardian signature.
 - b. Attach one research plan for the project – describe what each student will do.
5. If you are working with **ANY** of the following items, you must have a “Qualified Scientist/Adult Sponsor” to supervise your work and **be approved by a local SRC Committee BEFORE beginning the project!** You **must also attach additional ISEF forms** as shown on p. 3 of this form.
 - a) **Projects involving Humans** (for example projects with surveys, tests, reaction times or exercise. This includes if the student studies his/ herself).
 - b) **Micro-organisms** – this includes any project with bacteria and fungi (See ISEF Rules on page 13 for complete list). **Students can NOT grow bacteria at home.** Teachers/Parents read additional rules for projects with micro-organisms. **Because of the risks and safety rules associated with culturing bacteria, these projects are restricted to junior and senior divisions ONLY.**
 - c) **Vertebrate Animals** – this includes pets, farm animals, fish, and wild animals. Special rules apply for work with eggs and embryos.
 - d) **Potentially Hazardous Biological Agents** - in addition to micro-organisms this would include any work with human or animal tissues, blood or body fluids, fresh or frozen and recombinant DNA technologies. **As with bacteria, these projects are restricted to Junior and Senior Divisions only.**
 - e) **Hazardous Chemicals, Activities or Devices or using Regulated Substances** - examples: projectiles, rockets, gasoline, biofuels, alcohol. Check MSDS sheet for any **chemical** hazards.
 - f) **Projects done in Regulated Research Settings:** Projects done in professional research laboratories (university or industrial) – including where the parent is the scientist.

Research Plan

The **RESEARCH PLAN** can be written either using the scientific method or engineering process. It should have the components described below typed or handwritten neatly on a separate sheet(s). It should be attached to the forms above and turned in for review and approval prior to experimentation.

All Students Must Complete the Research Plan and turn it in for review prior to beginning experiment!

1. **Research Question or Problem:** Why are you doing this study?
2. **Hypothesis or Design Criteria.**
3. **Materials and Methods:** Detailed description of the materials, methods and procedures to be used, what type of data you expect to collect, and how you will analyze your data. This must include chemical concentrations, drug doses, number of experiments to be run, etc. For engineering projects – prepare preliminary designs. **Safety issues and chemical disposal** must be addressed in this plan.
4. **Bibliography/References** including at least **three** major sources (i.e., peer reviewed journal articles, books) from your library search. If you plan to use animals, an additional reference regarding animal care must be included. (If using internet resources, suggest using .edu and .gov sites for accuracy.)

Additional Forms That May Be Required

Please use the ISEF Rules Wizard at: <http://apps.societyforscience.org/isef/students/wizard/index.asp> and the ISEF Rules at: <http://www.societyforscience.org/Page.aspx?pid=321>

to understand the additional forms and rules that apply to your project.

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| Projects involving Humans (for example projects with surveys, tests, reaction times or exercise and including if the student studies his/ herself). | ISEF Form 4 Informed Consent form (required unless the IRB exempts the project) |
| Micro-organisms – this includes any project with bacteria, fungi or protists. Students should NOT grow bacteria at home. Teachers/Parents read additional rules for projects with micro-organisms. Restricted to Junior and Senior levels only. | ISEF Form 2 ISEF Form 6A |
| Vertebrate Animals – this includes pets, farm animals, fish, and wild animals. Special rules apply for work with eggs and embryos. | ISEF Form 5 |
| Potentially Hazardous Biological Agents (in addition to micro-organisms this would include any work with human or animal tissues, blood or body fluids, fresh or frozen and recombinant DNA technologies) Restricted to Junior and Senior levels only. | ISEF Form 6A and/or 6B as required |
| Hazardous Chemicals, Activities or Devices or using Regulated Substances (examples: projectiles, rockets, gasoline, biofuels, alcohol...check MSDS sheet for any chemical) | ISEF Form 3 |
| Research in a Regulated Research Setting: This includes any university or industrial lab. | ISEF Form 1C |

NCSEF Research Plan Approval Form Grades 3-8

Please Print or Type

Student's Name _____ Grade _____

Student's Email _____ Phone _____

Team Project? _____ Yes _____ No

Team Member(s) Name(s) (if working on a team): _____

Teacher's Name _____ Phone _____

Teacher's Email _____

School _____ LEA _____

School Address _____

Project Title _____

Where will the project be done? _____ Research Institution _____ School _____ Field _____ Home

Additional Forms Required (see #5 in directions): _____

Qualified Scientist/Adult Sponsor (if required): _____

E-mail _____ Phone _____

A qualified scientist/adult sponsor is required for any item listed in #5 in the directions. A qualified scientist is someone working as a scientist or engineer in the field of study/research.

Approvals:

Parent or Guardian Signature: _____ Date: _____

Teacher Approval Signature: _____ Date: _____

Teacher may give the final pre-approval **ONLY** if projects do not involve any of the items listed in number 5 above. If any questions, contact src@ncsciencefair.org or contact src@sciserv.org (the overall ruling authority).

Local SRC Approval (Prior to Research):

Signature: _____ Date: _____

E-Mail: _____ Phone: _____

Local SRC Approval (Post Research): _____ Date: _____

E-Mail: _____ Phone: _____

SRC Comments/Requirements should be listed on an attached page. **If the local committee has questions, please contact the regional director OR the state director. Please consult the ISEF Rules and Guidelines found at <http://www.societyforscience.org/isef/rulesandguidelines>. Training powerpoints and frequently asked questions and answers can be found at this site as well.**

If the project advances to a NC Regional Fair, then the following is required:

Regional SRC Approval: _____ Date: _____

Regional SRC Contact Name _____ Phone: _____

E-mail _____