MSEF
Massachusetts Science + Engineering Fair

Science Fair Ready Paperwork Packet

HIGH SCHOOL (Gr 9-12) projects.

This packet includes a merged PDF with the **forms required for ALL projects**.
Additional forms may be required for restricted area projects, continuation projects, or outside labs. Consult the manual. Email src@scifair.com with questions. WE ARE HERE TO HELP!

- ☐ **Form 1: Checklist for Adult Sponsor** - to be filled out by the teacher/sponsor
- ☐ **Form 1A: Student Checklist** - to be filled out by student/team (1 per project)
- ☐ **Form 1B: Approval Form and MSEF Permissions** This is a modified ISEF Form 1B to include MSEF specific permissions (1 per team member if applicable). Signed by parents, teachers, and adult sponsors.
- ☐ **Form 3: Risk Assessment** - Recommended for all projects. May be required for projects in restricted area, in which case pre-approval will be necessary. Fill it out now & speed up the approval process.

☐ In addition to this packet, you need your **detailed research plan.** See page 2 of form 1A for guidance.

Students (individual or teams) work independently on their project. These are the roles of supporting adults.

- **Teacher:** Provides oversight for the academic integrity & ethics of your project. Provides permission to participate and signs off in **zFairs**.
- **Adult Sponsor:** May also be your teacher. Provides oversight to the scientific integrity & ethics of your project. Signs off on your **forms**.
- **Parent/Guardian:** Provides permission for participation. Provides oversight for any work conducted at home.
- *Qualified Scientist* or *Designated Supervisor* are needed for projects in restricted areas. These roles may also be filled by your teacher depending on qualifications. See the **manual** for details.

Ethics Statement
tinyurl.com/59jfkyzd

Required Releases
tinyurl.com/ycx5rrkn

To edit:

- To Download PDF - make a copy to your drive OR print out. Do not open as a google doc.
- Fill out electronically ***OR*** by hand & scan. Make sure your scan is readable.

Upload this packet **PLUS** a detailed **Research Plan** to MAHS.zfairs.com (see page 4 for guidance) . Paperwork should be finalized within two weeks of creating an account.

Deadlines: Talk to your teacher about deadlines. All projects MUST be submitted by January 15th. Plan ahead. Paperwork submitted close to final deadline will take longer to be reviewed.

☐ If you DO NOT require additional forms*, your deadline for submission is _____, **no later than Jan 15.**

**Form 7 and Form 1C do not require advance approval.*

☐ If you **require** form 3, 4, 5, or 6, your paperwork MUST be submitted BEFORE you begin. Allow at least 10 days for approval. Submit by _____ , **no later Dec 15.**

☐ Once uploaded, ask your teacher to **'Mark Ready'** in their zFairs dashboard. Projects will not be reviewed until this box is checked. Incomplete projects will not be reviewed.

Find more information & registration at MAHS.zfairs.com
Questions? src@scifair.com

Checklist for Adult Sponsor (1)

This completed form is required for ALL projects.

To be completed by the Adult Sponsor in collaboration with the student researcher(s):

Student's Name(s): _____

Project Title: _____

1. ☐ I have reviewed the ISEF Rules and Guidelines, including the science fair ethics statement.

2. ☐ I have reviewed the student's completed Student Checklist (1A) and Research Plan/Project Summary.

3. ☐ I have worked with the student and we have discussed the possible risks involved in the project.

4. ☐ The project involves one or more of the following and requires prior approval by an SRC, IRB, IACUC or IBC:
   - ☐ Humans
   - ☐ Vertebrate Animals
   - ☐ Potentially Hazardous Biological Agents
     - ☐ Microorganisms ☐ rDNA ☐ Tissues

5. ☐ Items to be completed for **ALL PROJECTS**
   - ☐ Adult Sponsor Checklist (1)
   - ☐ Student Checklist (1A)
   - ☐ Research Plan/Project Summary
   - ☐ Approval Form (1B)
   - ☐ Regulated Research Institutional/Industrial Setting Form (1C) (when applicable; after completed experiment)
   - ☐ Continuation/Research Progression Form (7) (when applicable)

Additional forms required if the project includes the use of one or more of the following (check all that apply):

☐ **Humans,** including student designed inventions/prototypes. (Requires prior approval by an Institutional Review Board (IRB); see full text of the rules.)
- ☐ Human Participants Form (4) or appropriate Institutional IRB documentation
- ☐ Sample of Informed Consent Form (when applicable and/or required by the IRB)
- ☐ Qualified Scientist Form (2) (when applicable and/or required by the IRB)

Make note in the manual of any categories of research or materials that are exempt from prior review.

☐ **Vertebrate Animals** (Requires prior approval, see full text of the rules.)
- ☐ Vertebrate Animal Form (5A) - for projects conducted in a school/home/field research site (SRC prior approval required
- ☐ Vertebrate Animal Form (5B) - for projects conducted at a Regulated Research Institution. (Institutional Animal Care and Use Committee (IACUC) approval required prior experimentation.)
- ☐ Qualified Scientist Form (2) (Required for all vertebrate animal projects at a regulated research site or when applicable)

☐ **Potentially Hazardous Biological Agents** (Requires prior approval by SRC, IACUC or IBC, see full text of the rules.)
- ☐ Potentially Hazardous Biological Agents Risk Assessment Form (6A)
- ☐ Human and Vertebrate Animal Tissue Form (6B) - to be completed in addition to Form 6A when project involves the use of fresh or frozen tissue, primary cell cultures, blood, blood products and body fluids.
- ☐ Qualified Scientist Form (2) (when applicable)
- ☐ The following are exempt from prior review but require a Risk Assessment Form 3: projects involving protists, archae and similar microorganisms, for projects using manure for composting, fuel production or other non-culturing experiments, projects using color change coliform water test kits, microbial fuel cells, and projects involving decomposing vertebrate organisms.

☐ **Hazardous Chemicals, Activities and Devices** (No SRC prior approval required, see full text of the rules.)
- ☐ Risk Assessment Form (3)
- ☐ Qualified Scientist Form (2) (required for projects involving DEA-controlled substances or when applicable)

☐ **Other**
- ☐ Risk Assessment Form (3)

☐ **I attest to the information checked above and that I have read and agree to abide by the science fair ethics statement.**

Adult Sponsor's Printed Name	Signature	Date of Review (mm/dd/yy)
Phone	Email	

Student Checklist (1A)

This form is required for ALL projects.

1. a. Student/Team Leader: _____ Grade: _____

   Email: _____ Phone: _____

   b. Team Member: _____ c. Team Member: _____

2. Title of Project: _____

   _____

3. School: _____ School Phone: _____

   School Address: _____

   _____

4. Adult Sponsor: _____ Phone/Email: _____

5. Does this project need SRC/IRB/IACUC or other pre-approval? ☐ Yes ☒ No Tentative start date: _____

6. Is this a continuation/progression from a previous year? ☐ Yes ☒ No

   If Yes:

   a. Attach the previous year's ☐ Abstract **and** ☐ Research Plan/Project Summary

   b. Explain how this project is new and different from previous years on

   ☐ Continuation/Research Progression Form (7)

7. This year's experimentation/data collection: **When did you or when do you expect to start and stop?**

   _____ _____

   Actual Start Date: (mm/dd/yy) End Date: (mm/dd/yy)

8. Where will you conduct your experimentation? (check all that apply)

   ☐ Research Institution ☐ School ☐ Field ☐ Home ☐ Other: _____

9. Source of Data:

   ☐ Collected self/mentor ☐ Other Describe/url: _____

10. List the name and address of all non-home and non-school work site(s), whether you worked there virtually or on-site:

Name	_____	_____
Address:	_____	_____
	_____	_____
Phone/ email	_____	_____

11. **Complete a Research Plan/Project Summary following the Research Plan/Project Summary instructions and attach to this form.**

12. **An abstract is required for all projects after experimentation.** **This is a ~250 word summary about your project. You will upload to zFairs before the Fairs**

Research Plan/Project Summary Instructions

A complete Research Plan/Project Summary is required for ALL projects and must accompany Student Checklist (1A).

Upload your detailed project plan. Following the instructions below and/or templates at www.scifair.com

- All projects must have a Research Plan/Project Summary
  a. The Research Plan is to be written prior to experimentation following the instructions below to detail the rationale, research question(s), methodology, and risk assessment of the proposed research.
  b. If changes are made during the research, such changes can be added to the original research plan as an addendum, recognizing that some changes may require returning to the IRB or SRC for appropriate review and approvals. If no additional approvals are required, this addendum serves as a project summary to explain research that was conducted.
  c. If no changes are made from the original research plan, no project summary is required.
     - Some studies, such as an engineering design or mathematics projects, will be less detailed in the initial project plan and will change through the course of research. If such changes occur, a project summary that explains what was done is required and can be appended to the original research plan.
     - The Research Plan/Project Summary should include the following:
       a. **RATIONALE:** Include a brief synopsis of the background that supports your research problem and explain why this research is important and if applicable, explain any societal impact of your research.
       b. **RESEARCH QUESTION(S), HYPOTHESIS(ES), 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, and when applicable, the source of data used. 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.
       d. **BIBLIOGRAPHY:** List 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:

a. Participants: Describe age range, gender, racial/ethnic composition of participants. Identify vulnerable populations (minors, pregnant women, prisoners, mentally disabled or economically disadvantaged).
b. Recruitment: Where will you find your participants? How will they be invited to participate?
c. Methods: What will participants be asked to do? Will you use any surveys, questionnaires or tests? If yes and not your own, how did you obtain? Did it require permissions? If so, explain. What is the frequency and length of time involved for each subject?
d. Risk Assessment: What are the risks or potential discomforts (physical, psychological, time involved, social, legal, etc.) to participants? How will you minimize risks? List any benefits to society or participants.
e. Protection of Privacy: Will identifiable information (e.g., names, telephone numbers, birth dates, email addresses) be collected? Will data be confidential/anonymous? If anonymous, describe how the data will be collected. If not anonymous, what procedures are in place for safeguarding confidentiality? Where will data be stored? Who will have access to the data? What will you do with the data after the study?
f. 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:

a. Discuss potential ALTERNATIVES to vertebrate animal use and present justification for use of vertebrates.
b. Explain potential impact or contribution of this research.
c. Detail all procedures to be used, including methods used to minimize potential discomfort, distress, pain and injury to the animals and detailed chemical concentrations and drug dosages.
d. Detail animal numbers, species, strain, sex, age, source, etc., include justification of the numbers planned.
e. Describe housing and oversight of daily care.
f. Discuss disposition of the animals at the end of the study.

- **Potentially hazardous biological agents research:**
  a. Give source of the organism and describe BSL assessment process and BSL determination.
  b. Detail safety precautions and discuss methods of disposal.

4. Hazardous chemicals, activities & devices:

a. Describe Risk Assessment process, supervision, safety precautions and methods of disposal.
b. Material Safety Data Sheets are not necessary to submit with paperwork.

Approval Form (1B)

A completed form is required for each student, including all team members.

1. To Be Completed by Student and Parent

ISEF Form 1B

a. Student Acknowledgment:

- I understand the risks and possible dangers to me of the proposed research plan.
- I have read the ISEF Rules and Guidelines and will adhere to all International Rules when conducting this research.
- I have read and will abide by the science fair ethics statement.

Student researchers are expected to maintain the highest standards of honesty and integrity. Scientific fraud and misconduct are not condoned at any level of research or competition. Such practices include but are not limited to 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 and ISEF.

Student's Printed Name	Signature	Date Acknowledged (mm/dd/yy) (Must be prior to experimentation.)

b. Parent/Guardian Approval: I have read and understand the risks and possible dangers involved in the **Research Plan/Project Summary**. I consent to my child participating in this research.

Parent/Guardian's Printed Name	Signature	Date Acknowledged (mm/dd/yy) (Must be prior to experimentation.)

MSEF permissions: Review policies at MAHS.zfairs.com

Review policies at MAHS.zfairs.com

Ethics Statement tinyurl.com/59jfkyz

Required Releases tinyurl.com/ycx5rrkn

Student Address: Street, Town, Zip Code

_____

Student - I certify the following (must agree to all in order to participate):

☐ My science project complies with all the experimental rules of the Science Fair.
☐ I will respect other projects and property.
☐ I will treat all fellow participants, judges, volunteers and other science fair staff with respect and courtesy.
☐ I understand any violation of the above could result in removal from the competition.

STUDENT SIGNATURE: _____ Date _____

Parent/Guardian –

☐ I have read the project plan and Hold Harmless. I understand the risks and possible dangers involved in the project plan.
☐ I consent to my child participating in this project and I authorize my child to create an online account to enter necessary information for use with their science fair project.
☐ I authorize the publication of photos/videos taken of my child at Science Fair events. ☐ Yes ☐ No

PARENT SIGNATURE: _____ Date _____

Teacher -

☐ I certify that this student/team of students have permission from our school to participate in this project.
☐ I will provide oversight to the academic integrity of the project.
☐ I will support the student in participating/registering for the regional and/or state fairs as applicable and as instructed

TEACHER SIGNATURE: _____ Date _____

Adult Sponsor (may be teacher or parent listed above)

☐ I certify that the student(s) will lead their own work, with their own ideas.
☐ I will ensure the safety and scientific integrity of the work to the students, their community, and the environment.
☐ I have the content knowledge and expertise to supervise this work

ADULT SPONSOR SIGNATURE: _____ Date _____

Approval Form (1B)

A completed form is required for each student, including all team members.

1. To Be Completed by Student and Parent

ISEF Form 1B

a. Student Acknowledgment:

- I understand the risks and possible dangers to me of the proposed research plan.
- I have read the ISEF Rules and Guidelines and will adhere to all International Rules when conducting this research.
- I have read and will abide by the science fair ethics statement.

Student researchers are expected to maintain the highest standards of honesty and integrity. Scientific fraud and misconduct are not condoned at any level of research or competition. Such practices include but are not limited to 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 and ISEF.

Student's Printed Name	Signature	Date Acknowledged (mm/dd/yy) (Must be prior to experimentation.)

b. Parent/Guardian Approval: I have read and understand the risks and possible dangers involved in the **Research Plan/Project Summary**. I consent to my child participating in this research.

Parent/Guardian's Printed Name	Signature	Date Acknowledged (mm/dd/yy) (Must be prior to experimentation.)

MSEF permissions: Review policies at MAHS.zfairs.com

Review policies at MAHS.zfairs.com

Ethics Statement tinyurl.com/59jfkyz

Required Releases tinyurl.com/ycx5rrkn

Student Address: Street, Town, Zip Code

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Student - I certify the following (must agree to all in order to participate):

☐ My science project complies with all the experimental rules of the Science Fair.
☐ I will respect other projects and property.
☐ I will treat all fellow participants, judges, volunteers and other science fair staff with respect and courtesy.
☐ I understand any violation of the above could result in removal from the competition.

STUDENT SIGNATURE: _____ Date _____

Parent/Guardian –

☐ I have read the project plan and Hold Harmless. I understand the risks and possible dangers involved in the project plan.
☐ I consent to my child participating in this project and I authorize my child to create an online account to enter necessary information for use with their science fair project.
☐ I authorize the publication of photos/videos taken of my child at Science Fair events. ☐ Yes ☐ No

PARENT SIGNATURE: _____ Date _____

Teacher -

☐ I certify that this student/team of students have permission from our school to participate in this project.
☐ I will provide oversight to the academic integrity of the project.
☐ I will support the student in participating/registering for the regional and/or state fairs as applicable and as instructed

TEACHER SIGNATURE: _____ Date _____

Adult Sponsor (may be teacher or parent listed above)

☐ I certify that the student(s) will lead their own work, with their own ideas.
☐ I will ensure the safety and scientific integrity of the work to the students, their community, and the environment.
☐ I have the content knowledge and expertise to supervise this work

ADULT SPONSOR SIGNATURE: _____ Date _____

Approval Form (1B)

A completed form is required for each student, including all team members.

1. To Be Completed by Student and Parent

ISEF Form 1B

a. Student Acknowledgment:

- I understand the risks and possible dangers to me of the proposed research plan.
- I have read the ISEF Rules and Guidelines and will adhere to all International Rules when conducting this research.
- I have read and will abide by the science fair ethics statement.

Student researchers are expected to maintain the highest standards of honesty and integrity. Scientific fraud and misconduct are not condoned at any level of research or competition. Such practices include but are not limited to 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 and ISEF.

Student's Printed Name	Signature	Date Acknowledged (mm/dd/yy) (Must be prior to experimentation.)

b. Parent/Guardian Approval: I have read and understand the risks and possible dangers involved in the **Research Plan/Project Summary**. I consent to my child participating in this research.

Parent/Guardian's Printed Name	Signature	Date Acknowledged (mm/dd/yy) (Must be prior to experimentation.)

MSEF permissions: Review policies at MAHS.zfairs.com

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Student - I certify the following (must agree to all in order to participate):

- ☐ My science project complies with all the experimental rules of the Science Fair.
- ☐ I will respect other projects and property.
- ☐ I will treat all fellow participants, judges, volunteers and other science fair staff with respect and courtesy.
- ☐ I understand any violation of the above could result in removal from the competition.

STUDENT SIGNATURE: _____ Date _____

Parent/Guardian –

- ☐ I have read the project plan and Hold Harmless. I understand the risks and possible dangers involved in the project plan.
- ☐ I consent to my child participating in this project and I authorize my child to create an online account to enter necessary information for use with their science fair project.
- ☐ I authorize the publication of photos/videos taken of my child at Science Fair events. ☐ Yes ☐ No

PARENT SIGNATURE: _____ Date _____

Teacher -

- ☐ I certify that this student/team of students have permission from our school to participate in this project.
- ☐ I will provide oversight to the academic integrity of the project.
- ☐ I will support the student in participating/registering for the regional and/or state fairs as applicable and as instructed

TEACHER SIGNATURE: _____ Date _____

Adult Sponsor (may be teacher or parent listed above)

- ☐ I certify that the student(s) will lead their own work, with their own ideas.
- ☐ I will ensure the safety and scientific integrity of the work to the students, their community, and the environment.
- ☐ I have the content knowledge and expertise to supervise this work

ADULT SPONSOR SIGNATURE: _____ Date _____

Risk Assessment Form (3)

Must be completed before experimentation; recommended for all projects. May be required for projects involving Human Participants, Hazardous Chemicals, Materials or Devices or Potentially Hazardous Biological Agents.

If required, this project needs pre-approval from SRC BEFORE experimentation. If unsure, email src@scifair.com.

Student's Name(s) _____

Title of Project _____

_____

To be completed by the Student Researcher(s) in collaboration with Designated Supervisor/Qualified Scientist: (All questions must be answered; additional page(s) may be attached.)

Consider ANY safety risks to people, animals, community, or materials (physical or psychological).

1. Identify and assess the risks and hazards involved in this project.

2. a) List all hazardous chemicals, activities or devices to be used; b) identify and list all microorganisms to be used that are exempt from pre-approval (see Potentially Hazardous Biological Agent rules).

3. Describe the safety precautions and procedures that will be used to reduce the risks.

4. Describe the disposal procedures that will be used (when applicable).

5. List the source(s) of safety information.

To be completed and signed by the Designated Supervisor (or Qualified Scientist, when applicable):
I agree with the risk assessment and safety precautions and procedures described above. I certify that I have reviewed the Research Plan/Project Summary and the International Rules, including the science fair ethics statement and will provide direct supervision. May be your teacher or another trained adult. In some cases a parent has the appropriate expertise.

_____ _____ _____
Designated Supervisor's Printed Name | Signature | Date of Review (mm/dd/yy)

_____
Experience/Training as relates to the student's area of research

_____ _____
Position/Institution | Phone or email contact information