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. Find forms, High School Manual and more at MAHS.zfairs.com.. 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 *Direct Supervisor* are needed for projects in restricted areas. These roles may also be filled by your teacher *depending on qualifications*. See the High School Manual for details.

Ethics Statement
tinyurl.com/59jfkyzd

Hold Harmless
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. Typed, digital, or hand signatures are accepted.

Upload this packet **PLUS** a detailed **Research Plan** to MAHS.zfairs.com
Paperwork should be finalized within two weeks of creating an account.
Make sure your paperwork is readable (not blurry, too small, or too faint)

Deadlines: Talk to your teacher about deadlines. **Plan ahead. Paperwork submitted close to deadlines will take longer to be reviewed.**

☐ Projects requiring approval before experimentation are due December 15th. 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.**

☐ All other projects must be approved for regional and state fair participation. Your deadline for submission is _____, **no later than Jan 15.**

**Form 2A, 2C or 7 do not require advance approval.*

☐ Once uploaded, **ask your teacher to 'Mark Ready' in their zFairs dashboard.** Projects will not be reviewed until they are marked ready for review. Incomplete projects will not be reviewed.

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

Checklist for Adult Sponsor (1)

This form is required for ALL projects.
This form must be completed by the adult sponsor BEFORE experimentation.

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 Addendum.

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) ☐ Research Plan/Project Addendum ☐ Student Support Disclosure Form (2A)
   - ☐ Student Checklist (1A) ☐ Approval Form (1B)
   - ☐ Regulated Research Institutional/Industrial Setting Form (2C) (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 (2B) (when applicable and/or required by the IRB)

☐ **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 (2B) (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 (2B) (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**
- ☐ Risk Assessment Form (3)
- ☐ Qualified Scientist Form (2B) (as applicable, see full text of the rules)

☐ **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.
This form must be completed by the student(s) BEFORE experimentation.

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

   Email: _____ Phone: _____

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

2. Title of Project: _____

3. School: _____ School Phone: _____
   (if multiple schools, list of the team leader or list all schools).

School Address: _____

_____

4. Adult Sponsor: _____ Phone/Email: _____

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

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

6. 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 _____ _____

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

8. This year's experimentation/data collection:

_____ _____

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

9. Is this a continuation/progression from a previous year? ☐ Yes ☐ No
   a. If yes, attach the previous year's ☐ Abstract **and** ☐ Research Plan/Project Addendum
   b. Explain how this project is new and different from previous years on
   ☐ Continuation/Research Progression Form (7); include forms for all previous years

10. Source of Data:

    ☐ self-collected ☐ mentor collected ☐ publicly available ☐ Other

Provide a complete Research Plan/Project Addendum with this form.

Research Plan/Project Addendum

A Research Plan/Project Addendum is required for ALL projects. The plan must be written BEFORE experimentation.

1. The Research Plan is to be written prior to experimentation.
2. If changes are made during the research before competing at an affiliated fair, such changes must be added as an addendum to the original plan. Be aware that some changes may require obtaining or returning to the IRB or SRC for appropriate review and approvals before conducting that portion of the project. If there are no changes, an addendum is not required.
3. The Research Plan/Project Addendum should include the following:
   a. **RATIONALE**: Include a brief synopsis of the background that supports your research question/goal.
   b. **RESEARCH QUESTION(S), HYPOTHESIS(ES), ENGINEERING GOAL(S), EXPECTED OUTCOMES**: Include a brief synopsis of the background that supports your research question/goal.
   c. Describe the following in detail (include any required subject-specific additions to your Research Plan (listed below):
      - **List of materials:**
      - **Procedures/Methodology:** Detail all procedures and steps of the experimental design including methods for data collection, and when applicable, the source of data used. Be sure to differentiate steps to be taken by you and the steps that are to be taken by any supervising adult(s).
      - **Risk and Safety:** Identify any potential risks and describe safety precautions to be taken.
      - **Data Analysis:** Describe the procedures you will use to analyze the data/results.
   d. **ACKNOWLEDGEMENTS:** List all individuals that supported your project and the contributions that they made. If AI was used, document this support with a prompt log or an explanation of the elements of the project that involved AI support.
   e. **BIBLIOGRAPHY:** List major references (e.g. science journal articles, books, internet sites) from your literature review. Ensure that all references are properly listed and verified (The use of AI for citations is discouraged; it is known to hallucinate and produce false citations which becomes an ethical issue if you cite sources that are false or that you did not actually reference.)

Items 1–4 below are subject-specific guidelines for additional items to be included in your Research Plan/Project Addendum 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.

3. 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 specific methods of disposal.
   b. Safety Data Sheets must be reviewed and should be referenced but do not need to be submitted with paperwork unless required by your fair.

Approval Form 1B (Modified)

A completed form is required for **each student dated prior to experimentation**, including **all team members.**

Individual or Team Member #1 (lead)

To Be Completed by Student, Parent/Guardian, Teacher and Adult Sponsor

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.
- My project complies with all the rules of the Massachusetts Science & Engineering Fair Manual.
- I have read and will abide by the science fair ethics statement and commit to maintaining the highest standards of ethics – including academic and scientific integrity, legality and compliance, and respect for confidentiality and intellectual property. Scientific fraud and misconduct are not condoned at any level of research or competition.
- I understand any violation of the above could result in the removal from the competition.

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 Zip Code:

→

Student's Printed Name Signature (type or sign) Date Acknowledged (mm/dd/yy)

Parent/Guardian Acknowledgement:

- I have read and understand the risks and possible dangers involved in **the Research Plan/Project.** I consent to my child participating in this research/project.
- I have read the Massachusetts Science & Engineering Fair Hold Harmless.
- I authorize my child to create an online account to enter information for use with their science fair project.

→

Parent/Guardian's Printed Name Signature (type or sign) Date Acknowledged (mm/dd/yy)

Teacher Acknowledgement: *(also sign below if teacher is the Adult Sponsor)*

- 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/instructed.

→

Teacher's Printed Name Teacher Signature (type or sign): Date:

Adult Sponsor Acknowledgement (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's Printed Name Adult Sponsor Signature (type or sign): Date:

Approval Form 1B (Modified)

A completed form is required for **each student dated prior to experimentation**, including **all team members.**

Team Member #2 if needed

To Be Completed by Student, Parent/Guardian, Teacher and Adult Sponsor

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.
- My project complies with all the rules of the Massachusetts Science & Engineering Fair Manual.
- I have read and will abide by the science fair ethics statement and commit to maintaining the highest standards of ethics – including academic and scientific integrity, legality and compliance, and respect for confidentiality and intellectual property. Scientific fraud and misconduct are not condoned at any level of research or competition.
- I understand any violation of the above could result in the removal from the competition.

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 Zip Code:

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Student's Printed Name Signature (type or sign) Date Acknowledged (mm/dd/yy)

Parent/Guardian Acknowledgement:

- I have read and understand the risks and possible dangers involved in **the Research Plan/Project.** I consent to my child participating in this research/project.
- I have read the Massachusetts Science & Engineering Fair Hold Harmless.
- I authorize my child to create an online account to enter information for use with their science fair project.

→

Parent/Guardian's Printed Name Signature (type or sign) Date Acknowledged (mm/dd/yy)

Teacher Acknowledgement: *(also sign below if teacher is the Adult Sponsor)*

- 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/instructed.

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Teacher's Printed Name Teacher Signature (type or sign): Date:

Adult Sponsor Acknowledgement (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.

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Adult Sponsor's Printed Name Adult Sponsor Signature (type or sign): Date:

Approval Form 1B (Modified)

A completed form is required for **each student dated prior to experimentation**, including **all team members.**

Team Member #3 if needed

To Be Completed by Student, Parent/Guardian, Teacher and Adult Sponsor

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.
- My project complies with all the rules of the Massachusetts Science & Engineering Fair Manual.
- I have read and will abide by the science fair ethics statement and commit to maintaining the highest standards of ethics – including academic and scientific integrity, legality and compliance, and respect for confidentiality and intellectual property. Scientific fraud and misconduct are not condoned at any level of research or competition.
- I understand any violation of the above could result in the removal from the competition.

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 Zip Code:

→

Student's Printed Name Signature (type or sign) Date Acknowledged (mm/dd/yy)

Parent/Guardian Acknowledgement:

- I have read and understand the risks and possible dangers involved in **the Research Plan/Project.** I consent to my child participating in this research/project.
- I have read the Massachusetts Science & Engineering Fair Hold Harmless.
- I authorize my child to create an online account to enter information for use with their science fair project.

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Parent/Guardian's Printed Name Signature (type or sign) Date Acknowledged (mm/dd/yy)

Teacher Acknowledgement: *(also sign below if teacher is the Adult Sponsor)*

- 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/instructed.

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Teacher's Printed Name Teacher Signature (type or sign): Date:

Adult Sponsor Acknowledgement (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.

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Adult Sponsor's Printed Name Adult Sponsor Signature (type or sign): Date:

Risk Assessment Form (3)

This form is recommended for ALL projects; may be required for projects involving hazards, potentially hazardous biological agents or human participants. This form must be completed BEFORE experimentation.

Student's Name(s) _____

Title of Project _____

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

1. a) List all hazardous chemicals, activities or devices to be used

   b) List all microorganisms to be used

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

3. Describe the safety precautions and procedures that will be used to reduce the risks. If you conducted field work, include permits received and safety plans, as applicable.

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

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

To be completed and signed by the Direct 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 Addendum and the International Rules, including the science fair ethics statement and will provide direct supervision.

Direct 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 _____