

# Regeneron Westchester Science & Engineering Fair

# **Rules and Participation Handbook**

March 16th, 2024

**WESEF.org** 





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	Important Dates to Know					
Opens Nov 1st, 2023 Closes Dec 8th, 2023	<ul> <li>Online student registration - must be completed with the Science Research teacher.</li> <li>Participant's research plan, paper, abstract on WESEF form, entry fees, and all forms must be uploaded by this date.</li> </ul>					
Dec 15, 2023	<ul> <li>NEW THIS YEAR: Teachers review student paperwork, ensuring that all required forms are complete, correct and uploaded in the correct locations.</li> <li>Regular (\$60 per student) AND extended deadline fees (\$100 per project) must be postmarked by this date. (Any students/projects opting for extended deadline must submit Forms 1, 1A, 1B, Research Plan to zFairs and postmark payment)</li> </ul>					
Jan 15, 2024	<ul> <li>Optional extended deadline for participant's research paper, abstract, and remaining forms must be postmarked by this date. (Late fee of \$100 per project, in addition to the \$60 registration fee, and initial forms must be submitted by Dec 15, 2023)</li> </ul>					
March 15, 2024	Mandatory Poster Set-Up at Somers HS, after school.					
Mar 16, 2024	WESEF In-person full-day event at Somers High School. Judging during the day.					
Mar 21, 2024	Regeneron WESEF Awards Ceremony held at Somers High School					
May 11-17, 2024	Regeneron ISEF will be held in Los Angeles, California					
June TBD, 2024	Genius Olympiad - Rochester Institute of Technology - Rochester, NY					

# Introduction

The Westchester Science & Engineering Fair (WESEF) provides students from all area high schools in Westchester, Putnam and Sullivan counties the opportunity to showcase their multi-year, STEM research projects in a competitive venue. The students are judged by local experts in the fields of life science, physical science, environmental studies, psychology and engineering.

Last year, over 500 students participated and over 75 percent of the presenters won an award. The grand prizes are trips to either the International Science & Engineering Fair (ISEF) or the Genius Olympiad. Both of these international fairs bring together hundreds of science fair winners from all over the world to compete against each other.

The opportunities that WESEF and their corporate donors have provided have helped to shape the future of thousands of local area high school students in addition to helping to support and build STEM education programs throughout the Hudson Valley region.



# Participating schools from previous years

Ardsley HS	Blind Brook HS	Briarcliff HS
Bronxville HS	Byram Hills HS	Carmel HS
Croton-Harmon HS	Dobbs Ferry HS	Eastchester HS
Edgemont HS	Fox Lane HS	Hackley HS
Harrison HS	Hastings HS	Hendrick Hudson HS
Horace Greeley HS	Iona Prep HS	Irvington HS
John Jay HS	Lakeland HS	Lincoln HS
Mahopac HS	Mamaroneck HS	Masters School
New Rochelle HS	North Salem HS Ossini	ng HS
Peekskill HS	Pelham HS	Pleasantville HS
Portchester HS	Putnam Valley HS	Rye High School
Rye Country Day School	Rye Neck HS	Scarsdale HS
Sleepy Hollow HS	Somers HS	Ursuline HS
Valhalla HS	Walter Panas HS	Westlake HS
White Plains HS	Yonkers Partners in Ed.	Yorktown HS

Any student from grades 9 - 12 in public, private, homeschool, or religious school in Westchester, Putnam, and Sullivan counties of New York State may enter WESEF.

# **Registration Checklist for WESEF**

# Online Student Registration - Nov 1st, - Dec. 8, 2023 at 11:59pm Teachers must register themselves first using the **zFairs platform** prior to allowing students to register by **Dec 8th, 2023**. All teachers must make a new zfairs account, no information from last year's fair is carried over. ☐ Students may not register electronically without the supervision of the teacher. We realize it is time consuming but it helps to avoid several mistakes down the road including incorrect category placement and even possible disqualification. Link for teacher/student registration: www.wesef.zfairs.org □ New this year, teachers will be given a window to review student paperwork that has been uploaded. Teacher review must be complete by **Dec 15th**, **2023**. It is important that the teacher double checks that each question for each student has been answered. Failure to do so may make the student ineligible for certain awards. This will be very easy if the teacher works with each student while they register. ☐ Once the registration deadline has passed, NO ADDITIONAL students will be allowed to register. Therefore, teachers - please double check your WESEF registration list against your class roster. ☐ We recommend that you keep a digital or printed copy of your student lists for your own records. II. Forms, Abstract & Research Paper Submission - December 8th 2023 Deadline for online submission of participants' research paper, abstract, all forms (see below for more info.) and entry fees (\$60 per student -not project). It is essential that you only register students that you are very confident will be ready for WESEF. Fee is non-refundable. ☐ Research plan must be in **Future Tense** Research plan should distinguish between role of mentor and role of student - this is very important ☐ Teacher is the "Adult Sponsor"; Mentor is the "Supervising Scientist" □ Dates on ALL forms must be BEFORE the "Actual Start Date" on form 1A (except 1C & 5B) ONLY use the Official WESEF Abstract Form found at <a href="https://www.wesef.org">www.wesef.org</a> NOT the ISEF abstract ☐ Be SURE that the category chosen on the official WESEF abstract form **matches** the category that the student was registered for. \*\*Any student that has chosen the optional, extended deadline (Jan. 15th) MUST still submit forms 1, 1A, 1B and the research plan. In addition, the fee for the optional, extended deadline (combined \$60 normal fee + \$100 late fee per project) must also be postmarked at this time. III. Research Paper Deadline for Extended Deadline Only - January 15th 2024 • Optional Extended Deadline only for projects that registered and submitted the \$160 by December 15th, 2023 (combined \$60 normal fee + \$100 late fee per project) ☐ Participant's research paper, abstract, and remaining forms

☐ Any missing paperwork at this time will result in a disqualification

### **WESEF Payment:**

- ☐ It is essential that you register only students that you Check made out to: WESEF are very confident will be ready for WESEF. Mail to: ☐ Fees are non-refundable regardless if a Stephanie Peborde Burke student/team drops or is disqualified WESEF Treasurer (because of student or teacher error). PO BOX 1373 ☐ Cost will be \$60 per student for the regular deadline Yorktown Heights, NY 10598 submission of all materials. Any project that opts for the **extended paperwork deadline** must submit a total **payment** of \$160 (\$60 for regular deadline + \$100 extended deadline fee) along with forms 1, 1a, 1b and research plan by the regular deadline and then will submit their paper and abstract by the January 15th deadline. Paperwork will be uploaded to zFairs, while payment will be mailed. The **extended deadline fee is a per-project fee**, meaning individuals and teams both would pay the \$100 if seeking the extended deadline. However, a team of two would only need to pay an additional \$100 (combined) if they opted for the extended deadline.
- ☐ Checks/POs/invoice and extended deadline checks MUST BE postmarked by Dec 15, 2023
  - ☐ Make all checks/purchase orders payable to "WESEF"
- ☐ Teachers/schools who have students who pay individually, should collect all the checks and mail them together in one envelope. No checks mailed independently by individual families, students, mentors will be accepted.
- ☐ Please PRINT the school name and student name on personal checks (however, **ONE LUMP SUM IS PREFERRED**). **DO NOT SEND CASH!**
- ☐ Please plan ahead if your school/district will pay with a purchase order. There is usually a major delay between a request for payment (PO) and when the check is written.
- ☐ Final payment for purchase orders in the form of a school-issued check must be postmarked NO LATER than January 15, 2024.
- Bounced checks will incur an additional fee (according to bank prices TBD).
- ☐ Include a completed copy of the invoice with payment.

  A copy of the WESEF W-9 form with our Tax ID and an invoice can be found on the website (www.wesef.org) under the "For Teachers" tab
- ☐ Checks are to be made out to "WESEF" and mailed to:

Stephanie Peborde Burke WESEF Treasurer PO Box 1373

Yorktown Heights, NY 10598

**PLEASE NOTE:** In the past, we have asked schools to send money with papers and forms to Angelo Piccirillo, and schools have entered his school address as the place where the checks are mailed. **You MUST inform your district of the change of address** for the payment so that they update it in their system.

# **Project Categories**

Many projects could easily fit into more than one WESEF category. We highly recommend that you review the entire listing of the categories on the <u>ISEF site</u> before carefully choosing the category that most accurately describes your project.

WESEF C	ategories
Animal Science (AS): Includes all aspects of animals and animal life, animal life cycles, and animal interactions with one another or with their environment.	Behavioral Science (BE): The science or study of the thought processes and behavior of humans and other animals in their interactions with the environment studied through observational and experimental methods.
<b>Biochemistry (BI):</b> The study of the chemical basis of processes occurring in living organisms, including the processes by which these substances enter into, or are formed in, the organisms and react with each other and the environment.	Cellular & Molecular Biology (CB): This is an interdisciplinary field that studies the structure, function, intracellular pathways, and formation of cells. Studies involve understanding life and cellular processes specifically at the molecular level.
<b>Chemistry (CH):</b> Studies exploring the science of the composition, structure, properties, and reactions of matter not involving biochemical systems.	Computational Biology & Bioinformatics (CBIF): Studies that primarily focus on the discipline and techniques of computer science and mathematics as they relate to biological systems.
<b>Computer Science (CO):</b> The study or development of software, information processes, or methodologies to demonstrate, analyze, or control a process/solution.	Earth & Planetary Science (ES): Studies of Earth and other planetary systems and their evolution.
Engineering (ENG): Studies that focus on the science and engineering that involve movement or structure. The movement can be by the apparatus or the movement can affect the apparatus. Additionally, projects that involve the application of engineering principles and design concepts.	<b>Environmental Science (ENV):</b> Studies of the environment and its effect on organisms/systems, including investigations of biological processes such as growth and lifespan.
<b>Mathematics (MA):</b> The study of the measurement, properties, and relationships of quantities and sets, using numbers and symbols. The deductive study of numbers, geometry, and various abstract constructs, or structures.	Medicine & Health (ME): This category focuses on studies specifically designed to address issues of human health and disease.
<b>Microbiology (MI):</b> The study of microorganisms, including bacteria, viruses, fungi, prokaryotes, and simple eukaryotes as well as antimicrobial and antibiotic substances.	Neuroscience (NS): Projects related to neurology and cognitive neuroscience.
Physics & Astronomy (PHAST): Physics is the science of matter and energy and of interactions between the two. Astronomy is the study of anything in the universe beyond the Earth.	Plant Science (PS): Studies of plants and how they live, including structure, physiology, development, and classification. Includes plant cultivation, development, ecology, genetics and plant breeding, pathology, physiology, systematics and evolution.

# **Rules for Participating in WESEF**

#### **Ethics Statement**

Scientific fraud and misconduct are not condoned at any level of research or competition. This includes 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 the ISEF. WESEF reserves the right to revoke recognition of a project subsequently found to have been fraudulent.

### **Eligibility**

- Any student in grades 9-12 or equivalent, enrolled in a public, private, parochial, or home school in the region covered by WESEF (Westchester, Putnam & Sullivan Counties) is eligible to participate in WESEF.
- 2. If there is a Science Research program in a school, then only students in that program may participate in WESEF.
- 3. Students may not have reached 21 years of age, on or before May 1st of the event year.
- 4. Students are not permitted to simultaneously enter 6. another regional ISEF-affiliated science fair (including the NYS Science Fair) without prior written consent of the WESEF board.
   7.
- 5. Team projects may have a maximum of three team members. A mixed team with members from different geographic regions may compete at WESEF (one team member must be from Westchester- Putnam region or in teams or three, two must be from our region), but not at multiple
- fairs. Out of region students must pay an additional \$100 registration fee. Each team is encouraged to appoint a team leader to coordinate the work and act as spokesperson. However, each member of the team should be able to serve as spokesperson, be fully involved with the project, and must be familiar with all aspects of the project. The final work should reflect the coordinated efforts of all team members and will be evaluated using similar rules and judging criteria as individual projects.
- 6. Projects that are demonstrations, 'library' research or informational projects, 'explanation' models or kit building are not appropriate for the ISEF.
- 7. A research project may be a part of a larger study performed by professional scientists, but the project presented by the student must be only their own portion of the complete study.

# **General Requirements**

- 1. All students competing in WESEF must adhere to all of the rules as set forth in this document.
- 2. All projects must adhere to the **Ethics Statement** above.
- 3. It is the responsibility of the student researcher(s) and the Adult Sponsor to evaluate the study to determine if the research will require forms and/or review and approval prior to experimentation, especially projects that include human participants, vertebrate animals, or potentially hazardous biological agents.
- 4. Projects must adhere to local, state and U.S. Federal laws, regulations and permitting conditions. In addition, projects conducted outside the U.S. must also adhere to the laws

- of the country and jurisdiction in which the project was performed.
- 5. The use of non-animal research methods and the use of alternatives to animal research are strongly encouraged and must be explored before conducting a vertebrate animal project.
- 6. Introduction or disposal of non-native and/or invasive species (e.g. insects, plants, invertebrates, vertebrates), pathogens, toxic chemicals or foreign substances into the environment is prohibited. It is recommended that students reference their local, state or national regulations and quarantine lists.
- 7. WESEF projects must adhere to ISEF display and safety requirements.

# **Project Display**

# **Maximum Size of Project**

**Depth** (front to back): 30 inches or 76 cm

Width (side to side): 48 inches or 122 cm

Height (floor to top): 108 inches or 274 cm

#### PLEASE DO NOT INCLUDE THE FOLLOWING AS PART OF YOUR WESEF DISPLAY:

- Mentor Names or Photographs
- Institution Names, Logos, or Photographs
- School Names, Logos, or Photographs
- Images showing graphic content

Please be aware when ordering posters that the mechanism that supports the poster should conform to the maximum size limitations stated above.

- All project materials and support mechanisms must fit within the project dimensions.
- At WESEF, fair-provided tables will not exceed a height of 36 inches (91 centimeters).
- If a table is used it becomes part of the project and must not exceed the allowed dimensions.

# Display Content for Projects Conducted at a Research Institution

The display must reflect only the work conducted by the finalist. Minimal reference to mentor's or other researcher's work must only reflect background information or be used to clarify differences between finalist's and others' work.

# Photograph/Image Display Requirements

Display of photographs of people other than that of the student researcher must have a photo release signed by the subject, and if under 18 years of age, also by the guardian of the subject.

Sample consent text: "I consent to the use of visual images (photos, videos, etc.) involving my participation/my child's participation in this research." (These forms must be available upon request, but shall not be displayed.



# Roles & Responsibilities of Students & Adults

### The Student Researcher(s)

The student researcher is responsible for all aspects of the research project including enlisting the aid of any required supervisory adults (Adult Sponsor, Qualified Scientist, etc.), obtaining necessary approvals (SRC, IRB, etc.), following the Rules & Guidelines of the ISEF, and performing the experimentation, engineering, data analysis, etc.

Scientific fraud and misconduct are not condoned at any level of research or competition. This includes 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. WESEF reserves the right to revoke recognition of a project subsequently found to have been fraudulent.

### **The Adult Sponsor**

An Adult Sponsor may be a teacher (preferred), parent, professor, and/or other professional scientist in whose lab the student is working. This individual must have a solid background in science and should have close contact with the student during the course of the project. The Adult Sponsor is responsible for ensuring the student's research is eligible for entry in the ISEF.

#### **Qualified Scientist**

A Qualified Scientist should have earned a doctoral/professional degree in a scientific discipline that relates to the student's area of research.

Alternatively, the SRC may consider an individual with extensive experience and expertise in the student's area of research as a Qualified Scientist. The Qualified Scientist must be thoroughly familiar with local, state, and federal regulations that govern the student's area of research.

# **Designated Supervisor**

The Designated Supervisor is an adult who is directly responsible for overseeing student experimentation. The Designated Supervisor need not have an advanced degree, but must be thoroughly familiar with the student's project, and must be trained in the student's area of research.

The Adult Sponsor may act as the Designated Supervisor.

### Scientific Review Committee (SRC)

The WESEF Scientific Review Committee (SRC) is a group of qualified individuals that is responsible for evaluation of student research, certifications, research plans and exhibits for compliance with the rules, applicable laws and regulations at each level of science fair competition. Most proposed research projects involving vertebrate animals and/or potentially hazardous biological agents must be reviewed and approved BEFORE experimentation. Local or regional SRC prior review is not required for human studies previously reviewed and approved by a properly constituted IRB.

ALL projects, including those previously reviewed and approved by an IRB must be reviewed and approved by the SRC after experimentation and before competition in an Affiliated Fair. Projects which were conducted at a Regulated Research Institution (not home, high school or field) and which were reviewed and approved by the proper institutional board before experimentation, must also be approved by the Affiliated Fair SRC.

### Institutional Review Board (IRB)

An Institutional Review Board (IRB), is a committee that must evaluate the potential physical and/or psychological risk of research involving humans. All proposed human research must be reviewed and approved by an IRB before experimentation begins. This includes review of any surveys or questionnaires to be used in a project.

Federal regulations require local community involvement. Therefore, it is advisable that an IRB be established at the school level to evaluate human research projects. An IRB must consist of a minimum of three members including the following: an educator, a school administrator (preferably principal or vice principal), and a medical or mental health professional.

To avoid conflict of interest, no Adult Sponsor, parent or other relative of the student, the Qualified Scientist, or Designated Supervisor who oversees the project may serve on the IRB reviewing that project

# Message from the WESEF Scientific Review Committee

Prior to attempting to complete any documentation for entry to WESEF, we strongly recommend that students communicate with mentors and/or adult sponsors to firmly grasp the extent of the research and the necessary documentation that WESEF requires for the student's project.

To help guide you with the appropriate forms, before you start your research, we strongly suggest you use the Rules Wizard available at: <a href="https://ruleswizard.societyforscience.org/">https://ruleswizard.societyforscience.org/</a>



## **Top Six WESEF Paperwork Problems to Avoid:**

- 1. Research plan lacks sufficient details and fails to provide thorough information to support the documentation provided. A properly written research plan must include:
  - the proposed and actual start & end dates on Form 1A
  - a detailed research plan projects which cannot be assessed because the research plan is not sufficient will fail to qualify.
  - all work site information completed
  - must identify **student and mentor roles**
- 2. Missing Form 3 Risk Assessment
  - Must be completed for projects that involve chemicals, equipment, or other potential hazards
  - Often missing, and often incomplete without description of safety precautions taken
- 3. Project duration not within a single calendar year
- 4. Missing IRB or incomplete with missing signatures on Human Subjects Form 4
- 5. Tissue analysis and bioinformatic projects are incorrectly identified as vertebrate animal projects
- 6. Failure to include a **HIPAA letter** from a mentor for all studies involving de-identified human data. This letter should be on the institution letterhead from the mentor. It should describe the data set and indicate that the data set was de-identified, prior to student use.
- 7. Research project lacks original student generated data.

Questions? Email the WESEF SRC at wesefsrc@gmail.com

# Common Reasons a Project Would "Fail to Qualify" at WESEF/ ISEF:

#### 1. Human, vertebrate animal, or PHBA studies that did not have pre-approval

- Need IRB pre-approval for human participant studies
- Need SRC or IACUC pre-approval for vertebrate animal studies
- Need SRC or IBC pre-approval for PHBA studies

#### 2. Prohibited Vertebrate Animal Studies

- Studies done at home/school/field that should have been done at a regulated research institution
- o Studies that caused more than momentary pain, suffering, or stress -- or designed to kill
- Induced toxicity studies
- Predator/vertebrate prey experiments
- o Studies where student performed euthanasia on a vertebrate animal
- o Studies with an animal death in any group or subgroup due to the experimental procedures
- o Studies where animals have a weight loss greater than or equal to 15%
- o Studies where there was an inappropriate restriction of water or food
- o Studies treated as embryonic studies that were actually vertebrate studies

#### 3. Prohibited Studies using Potentially Hazardous Biological Agents (PHBA's)

- o Microorganisms were cultured at home
- BSL-2 studies (including opening plates or containers of unknown microorganisms) done in a BSL-1 lab
- Studies using human and other primate established cell lines without SRC pre-review and approval

#### 4. Prohibited Human Participant Studies

- o Studies where the IRB required written documentation of consents which were not obtained
- o Studies where the student used surveys/questionnaires without IRB pre-review and approval

#### 5. Eligibility Problems

- o Project does not show independent data collection
- Student worked with a partner or team but competed as an individual, or vice versa
- o Project was more than 1 year in length or was too old
- More than three students on a team
- o Student was from outside of our affiliate region, must attend a different ISEF affiliated fair
- Student missed deadlines for registration, paperwork, or entry fee
- Failed to set-up poster display on Friday before WESEF

#### 6. Scientific Misconduct

- o Plagiarism
- Student presented mentor's research as his/her own
- Falsification of data
- Student did not generate original data beyond library research/ literature review

#### 7. Research Plan

- o Lacks details of research
- Rationale section is missing
- o Forms submitted do not reflect research plan submitted

# Judging at WESEF

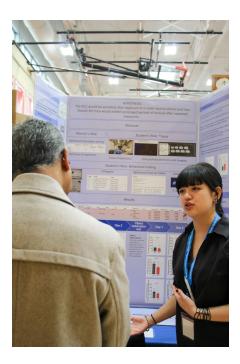
### The Judging Process

- WESEF 2024 will be held in-person at Somers High School
- Projects will likely have five official judge interviews. The students should be prepared to give a **seven minute summary** of their research.
   Judges are then permitted 5 minutes for Q&A.
- There will be official judging periods, indicated by a tone which will signal the start and finish of each judging session. Judges will then have a 5 minute window to score rubrics and move to the next poster.
- In some cases, Special Awards Judges will also meet with and interview students
- Under no circumstances should a Judge review a student project for which there may be a conflict of interest. Judges are asked to recuse themselves from any projects where they do not feel they can fairly assess a student project.



## **Advice for Judges**

- Examine the quality of the student's work, and how well the student understands his or her project and area of study.
   The physical display is secondary to the student's knowledge of the subject. Look for evidence of laboratory, field or theoretical work, not just library research or gadgeteering.
- Judges should keep in mind that competing in a science fair is not only a competition, but an educational and motivating experience for the students. The high point of the fair experience for most of the students is their judging interviews.
- As a general rule, judges represent professional authority to Finalists. For this reason, judges should use an encouraging tone when asking questions, offering suggestions or giving constructive criticism. Judges should not criticize, treat lightly, or display boredom toward projects they personally consider unimportant. Always give credit to the Finalist for completing a challenging task and/or for their success in previous competitions.



- Compare projects only with those competing at this Fair and not with projects seen in other competitions or scholastic events.
- Please be discreet when discussing scores or making critical comments, as students, mentors, or teachers might overhear. Results are confidential until announced at the awards ceremony

# **Awards & Honors**

At the 2023 Regeneron- Westchester Science & Engineering Awards Ceremony, over \$100,000 in awards and prizes were given out to students for their scientific accomplishments. Approximately 75% of all participants received an award at the WESEF Awards Ceremony, thanks to the generous support from our local and ISEF affiliated donors.

#### **Grand Awards:**

**Determined by Score:** Each student will present their project to 5 judges that will score the project independently. Scores are added to produce a final score which allows us to distribute awards and select Finalists.

**ISEF:** The top 15–20 scoring projects are selected to represent our region at the Regeneron International Science & Engineering Fair. This honor includes participation in the 2024 Regeneron International Science and Engineering Fair where the student will compete



against the best research students from all over the world.

Special thanks to the continuous support of our donors including Regeneron, Con Edison, the Boehringer-Ingelheim Cares Foundation, the Westchester Academy of Medicine and Carl Zeiss Microscopy.

**Genius Olympiad**: Up to 15 student projects (excluding senior projects) will qualify through Regeneron WESEF to attend the Genius Olympiad (all expenses paid) held annually in June at Rochester Institute of Technology. This international fair draws students from over 70 countries. More info about this event can be found at <a href="https://www.geniusolympiad.org">https://www.geniusolympiad.org</a>.

Anyone that wins a spot to the Genius Olympiad, through Regeneron WESEF, will have to provide their own transportation and chaperone (parent/guardian) for the full duration of the trip in June 2024.

Students that qualify independently for Genius Olympiad, by direct paper submission will also have to organize their own transportation and chaperone (parent/guardian) for the duration of the trip.



## **Category Awards:**

Category awards are given to students in each of the categories represented at WESEF. Approximately 35% of students receive a category award with multiple winners at 1st, 2nd, 3rd and 4th place. Category winners receive a monetary award and a medal. Monetary awards will be mailed to teachers by early May.

### **Special Awards:**

Special awards are sponsored by local organizations as well as by national organizations through our affiliation with ISEF. Special awards are chosen based on a combination of both established criteria for each award and student score. Answering the questions presented to each student during online registration for WESEF helps us to narrow down the potential winners for each of these awards. In 2023, approximately 180 special awards were given at WESEF from local organizations such as Teatown, Westchester Academy of Medicine, Regeneron and many more!

### **Awards Ceremony:**

The awards ceremony will be held March 21, 2024 in the Somers High School Gymnasium. Students who are unable to attend the awards ceremony should have a fellow student or teacher pick up their award for them.

\*\* WESEF will follow the COVID health and safety protocol guidelines in effect at that time.

Award winners will be given specific instructions on how to claim their award. Please carefully read the instructions provided at the awards ceremony as each award has different requirements. While some awards require no additional action, it is up to the student to follow through on the directions to receive their awards. Certificates and monetary awards will be mailed to teachers by early May. Any questions regarding awards can be directed to Melissa Shandroff at <a href="mailto:shandroffm@hohschools.org">shandroffm@hohschools.org</a>.

Local awards will **require a thank you note** from the student to our sponsors. We are grateful to be able to provide numerous monetary awards, which would not be possible without the generous donations of our sponsors.

Students will be asked to fill out a Google Form by the end of March or early April with their thank you note and abstract. Teachers will be sent an email the week after WESEF with a link to the Google Form. Each individual winner and each team should submit one thank you note via the Google Form.

Students who do not send a thank you note will **not** receive their monetary awards. Teachers will be notified a week prior to the due date with names of students who have not sent in their thank you notes. Award money checks must be deposited by June 30th or will be considered null and void.

### **WESEF Executive Board**

Many special thanks are due to the members of the WESEF Executive Board, a panel of nine teacher volunteers who work tirelessly throughout the school year to pull this epic event together to support student interest and involvement in the sciences in our region.

#### President:

Michael Blueglass wesefpresident@gmail.com

#### Vice President & SRC Co-Chair:

Angelo Piccirillo apiccirillo@ossiningufsd.org

#### Vice President:

Janet Longo Abinanti irlongo@aol.com

#### **Judge Coordinator:**

Michele Sugantino wesefjudges1@gmail.com

#### **Assistant to the President:**

Steve Beltecas sbeltecas@pelhamschools.org

#### Treasurer:

Stephanie Peborde Burke treasurer@wesef.org

#### SRC Co-Chair:

Diana Evangelista devangelista@ardslevschools.org

#### Webmaster:

Valerie Holmes vholmes@ossiningufsd.org

#### **Awards Coordinator:**

Melissa Shandroff shandroffm@hohschools.org

#### **Assistant to Judge Coordinator:**

Michele Zielinski mzielinski@tufsd.org

#### **Host Committee Chair:**

William Maelia wmaelia@somersschools.org Thank You WESEF BOARD!

Finally, we wish to express our appreciation to the many student and teacher volunteers without whom our science fair would not be possible!



# **Frequently Asked Questions**

# Why does the research plan have to be in the future tense?

The research plan indicates all the aspects of the research to be conducted and determines the necessary documentation that the student will need to conduct the research. It is critical that it establishes what the student's actual role in the research and other individuals that will contribute to the research.

# What is the difference between the fair (WESEF) SRC and an institution's SRC?

The WESEF SRC uses the guidelines established by the ISEF SRC to determine if the project qualifies for WESEF. Meanwhile, an institution's SRC typically refers to the "body" that oversees projects conducted at that particular research institution. Procedures approved by institution SRC can still conflict with ISEF SRC rules—for example those involving pain tolerance or the death of animals. Thus, it is very important to make mentors aware of ISEF/WESEF rules and regulations when planning research.

# Can WESEF SRC approve a project before it starts? After it ends?

The WESEF SRC can approve a project with proper documentation in place before the project begins as long as procedures are not modified during the time research is carried out. All projects must be approved by WESEF SRC after it is conducted and this must occur prior to WESEF presentation.

# Can WESEF SRC disqualify a project that has been approved by an institution's SRC?

Yes, since it is possible that a project that can be approved by an institution with rules differing from those made by ISEF which is focused on high school researchers and thus has stricter rules.

# Can any school form their own IRB committee?

Yes, as long as they follow the rules and regulations provided by ISEF.

# Can a student who submitted to STS fail to qualify for WESEF?

Yes, STS does not have a scientific review committee (SRC) that reviews each project. Furthermore, there are notable differences in the qualifications of each competition.

# When should a project be classified as a continuation project?

A continuation project is one in which the project goes beyond one calendar year.

# Does ISEF limit the time or length of a project?

Yes, all projects must be within a calendar year which runs from January 2023 to May 2024.

# If I finish 1st in my category, does that mean that I won a trip to ISEF?

No, only the top 15-20 highest scoring projects overall qualify for ISEF.

# Once I have registered, can I change categories?

Yes, you will have one more chance to change your category prior to the fair.

# If I decide to drop-out of WESEF, can my fee be refunded?

Unfortunately entry fees are not refundable under any circumstances.

#### Are WESEF Rules the same as ISEF Rules?

WESEF rules are guided by ISEF rules, however they can differ based on our local needs. For instance, abstracts at WESEF cannot be displayed to avoid potential judge bias, which is not a concern at the international level.

# **Sponsors**

Title Sponsor  (Contribution of \$50,000 or more)	REGENERON science to medicine®		
Diamond Level  (Contributions of \$10,000 to \$49,999)	<b>conEdison</b>	ZEISS	
Platinum Level (Contributions of \$5,000 to \$9,999)	Boehringer Ingelheim <b>Cares</b> Foundation	TEATOWN	
Gold Level (Contributions of \$2,000 to \$4,999)	ST S	<b>MOMENTIV</b> E	A.S.R.T. Advancing STEM Research Teaching
Silver Level  (Contributions of \$500 to \$1,999)	LEASON ELLIS INTELLECTUAL PROPERTY ATTORNEYS	Westchester Psychological Association	
		Robert Weireter	Cornell University Division of Nutritional Sciences
Patron Level  (Contributions of \$200 to \$499)		omnicopromotions.com	
Friends Level (Contributions up to \$199)	Four Winds think	AK ACADEMY  Learn to Love Science!	Westchester Youth Volunteers

# How **YOU** can help support WESEF

## **Recruiting Judges**

Each year, the success of our fair depends on the participation of our generous judge volunteers; we typically require approximately 400 judges to view the exciting and cutting edge student projects - your help as a judge would be greatly appreciated!

#### Judging criteria include one of the following:

- Currently enrolled in a graduate program (M.S., M.A., M.Ed, D.O., Ed.D., D.D.S., D.V.M., Ph.D, M.D, etc.)
- Bachelor's degree + 2 years of job-related experience
- Current professional holding an advanced degree and working in any of the scientific fields represented at WESEF. This includes school psychologists, social workers, registered nurses, EPA, DEA professionals, etc. NOT eligible to judge: Current K-12 teachers

Our pool of judges typically includes: research scientists working in education and industry, current graduate students, retirees, psychologists and social workers, engineers, nurses, EPA and DEA professionals.

If you would like to volunteer as a judge, please contact **Dr. Michele Sugantino**, our Judge Coordinator at <a href="wesefjudges1@gmail.com">wesefjudges1@gmail.com</a>.

#### **Teacher Volunteers**

Teachers from each participating school are required to attend WESEF and we ask for your assistance with various tasks on set-up day or the day of the fair.

Additional opportunities exist to support WESEF during the school year including sub-committees and other tasks. Please contact any of our WESEF Board Members for more information.



#### Make a Tax Deductible Donation

WESEF is a 503c, non-profit organization - the opportunities we make available to our region's bright young scientists are only possible through the support of generous donors which include local industries, businesses, and individuals. Please contact our Fair Director, Mr. Michael Blueglass, about ways you can make a tax-deductible donation to support WESEF.

# **Checklist for Adult Sponsor (1)**

This completed form is required for ALL projects.

Го	be completed by	the Adult S	Sponsor in o	collaboration	on with th	e student	researcher(s):
----	-----------------	-------------	--------------	---------------	------------	-----------	----------------

Student's Name(s):	1	
Project Title:		
I have reviewed the ISEF	Mas belines, including the science fair ethics staten	nent.
2. I have reviewed the studen con	of the following and respired papers all properties of the following and respired papers as sible risks involved in the title as prior approval by an Si	oject Summary.
3.	nd we have risks involved in the	he project.
4. The project involves one or more Humans Vertebrate Animals	Potentially Hazardous Biolog	
	ROJECTS  Research Plan/Project S Approval Form (1B)  itutional/Industrial Setting Form (1C) (when applicable)  Progression Form (7) (when applicable)	
Additional forms required if the project i	includes the use of one or more of the following (che	eck all that apply):
Humans, including student design see full text of the rules.)	gned inventions/prototypes. (Requires prior approval	by an Institutional Review Board (IRB);
	) or appropriate Institutional IRB documentation	
**************************************	t Form (when applicable and/or required by the IRBY	Only check boxes that are
Qualified Scientist Form (2)	(when applicable and/or required by the IRB)	appropriate to your research
Vertebrate Animal Form (5A) Vertebrate Animal Form (5B) Use Committee (IACUC) app	ior approval, see full text of the rules.) -for projects conducted in a school/home/field rese -for projects conducted at a Regulated Research Ins- roval required prior experimentation.) Required for all vertebrate animal projects at a regula	titution. (Institutional Animal Care and
	al Agents (Requires prior approval by SRC, IACUC or I pical Agents Risk Assessment Form (6A)	BC, see full text of the rules.)
Human and Vertebrate Anim	al Tissue Form (6B)-to be completed in addition to F ry cell cultures, blood, blood products and body fluid	
The following are exempt from similar microorganisms, for particles.	om prior review but require a Risk Assessment Form 3 projects using manure for composting, fuel productic coliform water test kits, microbial fuel cells, and proj	on or other non-culturing experiments,
Risk Assessment Form (3)	s and Devices (No SRC prior approval required, see f	
Qualified Scientist Form (2)	(required for Res Involving DEA-controlled subst	tances or when applicable)
Other	(required for Rest involving DEA-controlled substantially the second that I have read and agree to abide by	he date Date
Risk Assessment Form (3)	usually the	must a star
☐ I attest to the informati	e and that I have read and agree to abide by	y the scien This "Actual ement.
· ve	(required for the mentor involving DEA-controlled substance) as the mentor involving DEA-controlled substance in the substance in the mentor involving DEA-controlled substance in the	tances or when applicable)  This must be dated Before  This must be dated Date on the scient the Machine Machi
Adult Sponsor's Printed Name	Signature	Date of Review (mm/dd/yy)
Phone	Email	
MONTH COTTO	-T11-1-T500/	

# Student Checklist (1A)

This form is required for ALL projects.

-	. a. Student/Team Leader:	Grade:
	Email:	Phone:
	b. Team Member: c.	. Team Member:
2.	Fit as much of the title as possible	
3.	S. School:	School Phone:
	School Address:  This should be the teacher not the mentor	Phone/Email:
4.	. Adult Sponsor: teacher not the	Phone/Email:
5.	i. Does this project need SM IRB/IACUC or other pre-appro	Phone/Email:  If the student has project the student h
5.	b. Explain how this project is new and different fro	esearch Plan/Project Summary
7.	This year's experimentation/data collection:  This year's experimentation/data collection:  This should be the sho	ous year and the date and be the date as the date and date as the
	Actual Start Date: (mm/dd/yy)	ate: (mm/dd/yy)
3.	B. Where will you conduct your experimentation? (check all ☐ Research Institution ☐ School ☐ Field ☐ H	
).	. Source of Data:	NOTE this <b>NEW</b> field
	☐ Collected self/mentor ☐ Other Describe/url:	that should be filled out if appropriate
	<ol><li>List the name and address of all non-home and non-scho virtually or on-site:</li></ol>	
0.	virtually or on-site:	
O. Jar		

 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.

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#### Research Plan/Project Summary Instructions

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

- · 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 processing
    - Data Analysis: Describe the procedures you will use to an d. BIBLIOGRAPHY: List major references (e.g. science journal If you plan to use vertebrate animals, one of these references

Items 1-4 below are subject-specific guidelines for additional items to be in applicable.

#### 1. Human participants research:

- Participants: Describe age range, gender, racial/ethnic composition pregnant women, prisoners, mentally disabled or economically disa
- b. Recruitment: Where will you find your participants? How will they be
- c. Methods: What will participants be asked to do? Will you use any sur did you obtain? Did it require permissions? If so, explain. What is the
- d. Risk Assessment: What are the risks or potential discomforts (physic participants? How will you minimize risks? List any benefits to societ
- e. Protection of Privacy: Will identifiable information (e.g., names, tele Will data be confidential/anonymous? If anonymous, describe how t are in place for safeguarding confidentiality? Where will data be stor the data after the study?
- f. Informed Consent Process: Describe how you will inform participan do, that their participation is voluntary and they have the right to sto

#### 2. Vertebrate animal research:

- a. Discuss potential ALTERNATIVES to vertebrate animal use and prese
- b. Explain potential impact or contribution of this research.
- Detail all procedures to be used, including methods used to minimiz animals and detailed chemical concentrations and drug dosages.
- d. Detail animal numbers, species, strain, sex, age, source, etc., include
- 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
- b. Detail safety precautions and discuss methods of disposal.

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

- a. Describe Risk Assessment process, supervision, safety precautions a
- Material Safety Data Sheets are not necessary to submit with papers

The research plan is the most important document because it provides the regional SRC board the necessary details of the planned research.

This detailed description of the research guides the SRC to be able to determine if the proper forms were completed and if they contain the correct information.

Must be VERY detailed and clearly delineate the role of the student vs. the role of the mentor

Entire Research Plan must be in FUTURE tense!!
Must include proposed and actual start and end dates
Must include detailed research plan Must have all work site information completed
Must identify student and mentor role

# Approval Form (1B)

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

The SRC/IRB write anything search Plan/ (not home of approve						
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 conduct 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 the proper integration of other researcher or competition. Such practices included plagiarism, forgery, use or presentation of other researcher's work as one's own, and fabrical projects will fail to qualify for competition in affiliated fairs and ISEF.  Student's Printed Name  Signature  Date Ack Volumbre Battle Battl			it and Parent			
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(where applicable)		Shair's Printed Na			Date of Approval (	min/aa/yy)

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# Regulated Research Institutional/Industrial Setting Form (1C)

This form must be completed AFTER experimentation by the adult supervising the student research either virtually or on site, conducted in a regulated research institution, industrial setting or any work site other than home, school or field.

Student's Name(s)					
Title of Project					
To be completed by the Supervising Adult in the Setting (NOT the Student(s)) after experimentation: (Responses must be on the form as it is required to be displayed at student's project booth; please do not print double-sided.)					
Research was supported at my work site:  1. Did you or your proxy (e.g. graduate student, postdoc, employee) mentor or provide substantial guidance to the student researcher?  a. If no, describe your and/or your institution's role with the student researcher and					
his/her project (e.g. supervised use of equipment on s and sign below.	research facility (college, pharmaceutical company, environmental testing facility, etc)				
b. If yes, complete questions 2-5.	or a facility where advanced research is allowed (certain high schools or local labs) the 1C form IS required.				
<ol> <li>Is the student's research project a subset of your ongoing Use questions 3, 4 and 5 to detail how the student's project different from ongoing research or work at your site. If this to be acknowledged, please list the grant statement here.</li> </ol>					
3. Describe the independence and creativity with which the sa. developed the hypotheses or engineering goals for the same content of the same con	If data is covered by privacy rules/laws (ex. Patient data) or from a private source (ex. Proprietary data), then the student must show documentation of how the data became available and how/why they were allowed to view it and study it.				
b. designed the methodology for his/her research projec	The best thing to do is have the mentor send a short letter on their letterhead explaining that there were no HIPAA violations. This is even if the data was de-identified.				
c. analyzed and interpreted data	See next page for more questions				
(Continued on	next page)				

# Regulated Research Institutional/Industrial Setting Form (1C) Continued

Sti	udent's Name(s)			
4.	Detail the student's role in conducting the research (e.g. data collection, specific performed). Differentiate what the student observed and what the student actual			
5.	Did the student(s) work on the project as part of a group?		☐ Yes	■ No
	Were there other high school students present? If yes, please list the student nar and describe how their work was related or different from the work of this project			
	I attest that the studen by institutional regular acknowledge that the hard acknowledge that the			
	I attest that the studen by institutional regular this story ACUC/IBC) has been obtained. Copies are a	require review	w applated	AFTER LA
	acknowledge that the the the student research the student research requirements for my review and/or restrictions	s of w	d Date" or	
	Supervising Adult's Printed Name Signature	This "Er		AFTER LA
	Institution	Date Signed (mu tion) (mm/dd/yy	ust be after ex	
L	Address	Email/Phone		

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# **Qualified Scientist Form (2)**

May be required for research involving human participants, vertebrate animals, potentially hazardous biological agents, and hazardous substances and devices. Must be completed and signed before the start of student experimentation.

Student's Name(s)	
Title of Project	
To be completed by the Qualified Scient Scientist Name:	
Educational Background:	
Experience/Training as relates to the student	
Position/Institution:	Email/Phone:
Have you reviewed the ISEF rules relevant fair ethics statement relevant to this proje	
<ul> <li>2. Will any of the following be used?</li> <li>a. Human participants</li> <li>b. Vertebrate animals</li> <li>c. Potentially hazardous biological agent tissues, including blood and blood prod.</li> <li>d. Hazardous substances and devices</li> </ul>	
3. Will this study be a sub-set of a larger study	dy? Yes No
4. Will you directly supervise the student?	☐Yes ☐No
<ul> <li>a. If no, who will directly supervise and s</li> <li>b. Experience/Training of the Designated</li> </ul>	erve as the Designated Supervisor?  d Supervisor:
To be completed by the Qualified Scientist I certify that I have reviewed and approved the Res Project Summary prior to the start of the experime If the student or Designated Supervisor is not train necessary procedures, I will ensure her/his training provide advice and supervision during the research a working knowledge of the techniques to be used student in the Research Plan/Project Summary. I u that a Designated Supervisor is required when the not conducting experimentation unde	when the Quality supervise.  I certify that I have review Summary and have been training to the graph of the supervise.
Signature Date of Approval (n	<u> </u>

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# 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.

To be completed by the Student Researcher(s) in collaborate Scientist: (All questions must be answered; additional page(s) mail. Identify and assess the risks and hazards involved in this project.  2. a) List all hazardous chemicals, activities or devices to be used; b) if are exempt from pre-approval (see Potentially Hazardous Biological	tion with Designated Supervisor/Qualified
Scientist: (All questions must be answered; additional page(s) ma  . Identify and assess the risks and hazards involved in this project.  2. a) List all hazardous chemicals, activities or devices to be used; b) in	
<ol> <li>a) List all hazardous chemicals, activities or devices to be used; b) i</li> </ol>	
Substituting with the Province of Edward Strategies and Constitution and Constitution (Edward Strategies Strat	
Describe the safety precautions and procedures that will be used to	o reduce the risks.
Describe the disposal procedures that will be used (when applicable	le).
. List the source(s) of safety information.	
To be completed and signed by the Designated Superviso I agree with the risk assessment and safety precautions and procedure: Research Plan/Project Summary and the International Rules, including direct supervision.	s described above. I certify that the science fair ethics statement is science fair ethics s
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

# **Human Participants Form (4)**

Required for all research involving human participants not at a Regulated Research Institution. If at a Regulated Research Institution, use institutional approval forms for documentation of prior review and approval. (IRB approval required before recruitment or data collection.)

tudent's Name(s)	Title of Project
dult Sponsor	Phone/Email
CIENTIST:	earcher(s) in collaboration with the adult sponsor/by ignated supervisor/quali an/Project Summary which addresses ALL areas indicated in the Instructions.
Any published instrument(s) I have attached an informed con	uestionnaires I will be using in my project or other documents of the study of the
	BELOW – IRB USE ONLY
MUST BE ANSWERED FOR THE APPR	IONAL REVIEW BOARD (IRB) AFTER REVIEW OF THE RESEARCH PLAN. ALL QUESTIONS ROVAL TO BE VALID. (IF NOT APPROVED, RETURN PAPERWORK TO THE STUDENT WITH
NSTRUCTIONS FOR MODIFICATION	
	out by the SCHOOL IRB and not the regional than Minim Notice that there interes (SRC). However, be sure that your
	e rules and limitations of student research
projects. For more inform	mation and the full list of rules:
https://student.societyfo	prscience.org/human-participants
	study)
o. Witten Illionned Consei	No Not applicable (No participants 18 yrs or older in this study)
Yes  RB SIGNATURES (All 3 signatures receintist or related to (e.g., mother, fa	Not applicable (No participants 18 yrs or older in this study)  equired) None of these individuals may be the adult sponsor, designated supervisor, qualifather of) the student (conflict of interest).
Yes  RB SIGNATURES (All 3 signatures receintist or related to (e.g., mother, fa	No Not applicable (No participants 18 yrs or older in this study)  equired) None of these individuals may be the adult sponsor, designated supervisor, qualifather of) the student (conflict of interest).  lent's project, that the checkboxes above have been completed to indicate the IRB
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RB SIGNATURES (All 3 signatures recientist or related to (e.g., mother, far attest that I have reviewed the studietermination and that I agree with the Medical or Mental Health Professional (a physician's assistant, doctor of pharmac Printed Name  Signature  Educator  Printed Name  Signature  Signature  Signature  Signature  Signature  Signature	Project, that the checkboxes above have been completed to indicate the IRB the decisions above.  It psychologist, medical doctor, licensed social worker, licensed clinical professional country, or registered nurse) with expertise related to this project.  Degree/Professional Living the dated Berone 1  Degr

### **Human Informed Consent Form**

Instructions to the Student Researcher(s): An informed consent/assent/permission form should be developed in consultation with the Adult Sponsor, Designated Supervisor or Qualified Scientist.

This form is used to provide information to the research participant (or parent/guardian) and to document written informed consent, minor assent, and/or parental permission.

- · When written documentation is required, the researcher keeps the original, signed form.
- Students may use this sample form or may copy ALL elements of it into a new document.

If the form is serving to document parental permission, a copy of any survey or questionnaire must be attached.

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Mar.
e to contact:
Phone/email:
If you decide not to participate there will not be negative to participate, you may stop participating at any time and you may
and understand the information above and I freely give my consent/participate.
Date Reviewed & Signed:(mm/dd/yy)
Signature:
Date Reviewed & Signed: (mm/dd/yy)

### Vertebrate Animal Form (5A)

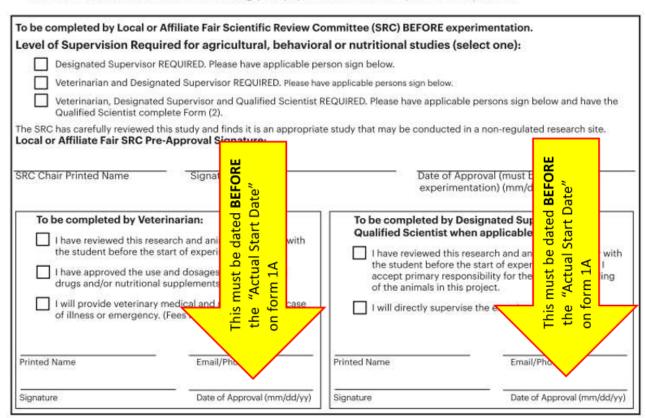
Required for all research involving vertebrate animals that is conducted in a school/home/field research site.

(SRC approval required before experimentation.)

Student's Name(s)			
Title of Project			

#### To be completed by Student Researcher:

- 1. Common name (or Genus, species) and number of animals used.
- Describe completely the housing and husbandry to be provided. Include the cage/pen size, number of animals per cage, environment, bedding, type of food, frequency of food and water, how often animal is observed, etc. Add an additional page as necessary.
- 3. What will happen to the animals after experimentation?
- 4. Attach a copy of wildlife licenses or approval forms, as applicable
- The ISEF Vertebrate Animal Rules require that any death, illness or unexpected weight loss be investigated and documented by a letter from the qualified scientist, designated supervisor or a veterinarian. If applicable, attach this letter with this form when submitting your paperwork to the SRC prior to competition.



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Vertebrate Animal Form (
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Student's Name(s)	
Title of Project	
Title and Protocol Number of IACUC Approved Project _	the actual IACUC form with
To be completed by Qualified Scientist or Principal Inv	
. Species of animals used:	Number of animals used:
<ol> <li>Describe, in detail, the role of the student in this project: a were involved, oversight provided and safety precautions</li> </ol>	
3. Was there any weight loss or death of any animal? If yes, at designated supervisor or a veterinarian documenting the	
Did the student's project also involve the use of tissues? No Yes; complete Forms 6A and 6B	
5. What laboratory training, including dates, was provided to	o the student?
5. Attach a copy of the Regulated Research Institution IACU or Principal Investigator is not sufficient.  This	
Qualified Scientist/Principal Investigator	End Date" on form 1A
Printed Name	"Orm 1A
Signature	Date (mm/dg

### Potentially Hazardous Biological Agents Risk Assessment Form (6A)

Required for research involving microorganisms, rDNA, fresh/frozen tissue (including primary cell lines, human and other primate established cell lines and tissue cultures), blood, blood products and body fluids.

SRC/IACUC/IBC approval required before experimentation.

tudent's Name(s)	
tle of Project	
be completed by the QUALIFIED SCIENTIST/DESIGNATED SUPERVISOR in collaboration with the student	

#### researcher(s). All questions are applicable and must be answered; additional page(s) may be attached. SECTION 1: PROJECT ASSESSMENT

- Identify potentially hazardous biological agents to be used in this experiment. Include the source, quantity and the biosafety level risk group of each microorganism.
- 2. Describe the site of experimentation including the level of biological containment.
- 3. Describe the procedures that will be used to minimize risk (personal protective equipment, hood type, etc.).
- 4. What final biosafety level do you recommend for this project given the risk assessment you conducted?
- 5. Describe the method of disposal of all cultured materials and other potentially hazardous biological agents.

#### **SECTION 2: TRAINING**

- 1. What training will the student receive for this project?
- 2. Experience/training of Designated Supervisor as it relates to the student's area of research (if applicable).

SECTION 3: For ALL CELL LINES, MICROORGANISMS AND TISSUES – To be complet DESIGNATED SUPERVISOR - Check the appropriate box(es) below:	
Experimentation on the microorganisms/cell lines/tissues to be used in this study Research Institution, but will be conducted at a (check one) ☐BSL-1 or ☐BSL-2 lat for BSL-2). [This study has been reviewed by the local SRC and the procedures hav to experimentation.]	boratory (include a copy of the checklist
	will be conducted at a Regulated r to experimentation; institutional approval proval
Experimentation on the microorgan Research Institution, which does not research plan and supporting documentation and acknowledges the accuracy of the QS/DS has seen this project's research plan and acknowledges the accuracy of the QS/DS has seen this project's research plan and acknowledges the accuracy of the QS/DS has seen this project's research plan and acknowledges the accuracy of the QS/DS has seen this project's research plan and acknowledges the accuracy of the QS/DS has seen this project's research plan and acknowledges the accuracy of the QS/DS has seen this project's research plan and acknowledges the accuracy of the QS/DS has seen this project's research plan and acknowledges the accuracy of the QS/DS has seen this project's research plan and acknowledges the accuracy of the QS/DS has seen this project's research plan and acknowledges the accuracy of the QS/DS has seen this project's research plan and acknowledges the accuracy of the QS/DS has seen this project's research plan and acknowledges the accuracy of the QS/DS has seen this project's research plan and acknowledges the accuracy of the QS/DS has seen this project's research plan and acknowledges the accuracy of the QS/DS has seen this project's research plan and the QS/DS has seen this project's research plan and the QS/DS has been plan and the QS/DS	will be conducted at a Regulated ne SRC has seen and approved the the responses above.
CERTIFICATION-To be SIGNED by the Control of TIST or DESIGNATED SUPE	RVISOR
The Q5/D5 has seen this project's research on the Q5/D5 has seen this project's research of the Q5/D5 has seen this project's research of the Q5/D5 has seen this project's research of the Q5/D5 has seen the Q5/D5 has see	owledges the accuracy of the information and will be conducted in an appropriate
QS/DS Printed Name	Date of review (mm/dd/yy)
SECTION 4: CERTIFICATION	RC
	es the accuracy of the information provided.
SRC Printed Name anything in this space	Date of review (mm/dd/yy)
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### Human and Vertebrate Animal Tissue Form (6B)

Required for research involving fresh/frozen tissue (including primary cell lines, human and other primate established cell lines and tissue cultures), blood, blood products and body fluids. If the research involves living organisms please ensure that the proper human or animal forms are completed. All projects using any tissue listed above must also complete Form 6A.

Student's Name(s)			
Title of Project			
To be completed by Student	Researcher(s):		
1. What vertebrate animal tissue of Fresh or frozen tissue so Fresh organ or other book Blood Body fluids Primary cell/tissue culture Human or other primate	ample ody part ures	heck all that apply.	
2. Where will the above tissue(s	s) be obtained? If using a	n established cell line i	nclude source and catalog number.
To be completed by the Que  I verify that the student will we or qualified personnel from the purpose other than the student.	the name of the research proval.  alified Scientist or Des ork solely with organs, tissue te laboratory; and that if ver	signated Supervisor:	hanized the way hized for a
AND/OR  I certify that the blood, blood standards and guidance set for Pathogens.			e nandle nandle
Printed Name	Signature	-	Date of Approval (mm/dd/yy) (Must be prior to experimentation.)
Title		Phone/Email	
Institution			-36

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# Continuation/Research Progression Projects Form (7)

Required for projects that are a continuation/progression in the same field of study as a previous project. This form must be accompanied by the previous year's abstract and Research Plan/Project Summary.

	Current Research Project	Previous Researd	Parto.
Title			Tried Out loartie
Change in goal/ purpose/objec- tive			
		ects <b>MUST</b> include t nmediately prior yea	
Changes in methodology	& Research Plan. back, the researc Abstract for each	clude BOTH the Absorber For any years farther her MUST include the additional prior year work.	er ne
Variable studied	FOR ALL projects	that were conducted to be January 1st 2022	ed
Additional changes			
ached are:		- 10	
Maria Marai	n Plan/Project Summary, Year		