



Republic of the Philippines
Department of Education
 MIMAROPA REGION
 SCHOOLS DIVISION OF MARINDUQUE

Department of Education
 Division of Marinduque
RECORDS SECTION
 002742
 OCT 05 2023

Office of the Schools Division Superintendent

September 25, 2023

DIVISION MEMORANDUM

No. **61** s. 2023

**GUIDELINES ON THE CONDUCT OF THE DIVISION SCIENCE
 & TECHNOLOGY FAIR FOR SY 2023-2024**

To: Assistant Schools Division Superintendent
 Chief Education Supervisors
 Public Schools District Supervisors
 Public & Private Secondary School Heads
 All Others Concerned

1. With reference to Regional Memorandum No. 125, s. 2023, this Division announces the schedule of the Conduct of Science & Technology Fair in four phases as follows:

Phase	Date	Activity	Person-In-Charge
Phase I	October 9-13, 2023	Conduct of District Level Science & Technology Fair both for Public and Private JHS and SHS levels	PSDSs District Secondary Science Coordinators
	October 17, 2023	Submission in 3 hard copies of SIP with complete ISEF forms to the Division Level for Screening	PSDSs District Science Coordinators
Phase II	October 18-24, 2023	Division Screening of the Projects per category	Division Scientific Review Committee (SRC)
	October 26, 2023	Meeting with the learners and advisors of the unqualified projects for the discussion of the disapproval/disqualification issues and their rights for	EPS-Science, Division SRC

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		addressed to the SRC chairperson explicitly stating the valid explanations to reconsider the disqualification of the entry.	
	October 27, 2023	Issuance of Division Memo for the list of qualified Research Projects to participate in the division level	EPS-Science
Phase III	October 31, 2023	Conduct of the Division Science & Tech Fair for SY 2023-24	EPS-Science, Contest Officials
Phase IV	November 9-10, 2023	Cliniquing, mentoring and coaching of the division representatives to the RSTF pre-evaluation of research projects	EPS-Science Division SRC

2. This activity aims to guide the schools and districts in preparing their students and teachers on the conduct of the school-level/district-level Science & Technology Fair.
3. The competition is open to all Grades 9-12 learners of both public and private secondary schools in the Division who have not reached the age of 20 on or before May 1 of the current school year.
4. Each District Focal Person is requested to coordinate with the private schools for their participation to the conduct of the District Science & Technology Fair 2023. Likewise, each district is requested to schedule its conduct of district-level Science Fair involving all the public and private JHS and SHS levels.
5. Top three (3) winners either from public or private schools in each category per district including the Innovation Expo will be screened by the division Scientific Review Committee (SRC) for Phase I, and qualifiers will advance to the Division Science and Technology Fair (DSTF) for Phase II. Research Papers must pass the division screening to qualify for the Division Level Competition.
6. Science Investigatory Project (SIP) write-ups in three (3) copies with complete ISEF Forms, shall be submitted to the Education Program Supervisor in Science at the Curriculum Implementation Division on or before October 6, 2023. Failure to submit the documents/write-ups on time shall automatically disqualify the district entries.

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7. Details on the conduct of the Division Science & Technology Fair shall be released in a separate Division Memorandum.

8. The following are enclosures to this Division Memorandum for the proper guidance on the conduct of the Division Science and Technology Fair:

- Enclosure No. 1: Roles and Responsibilities of Learners and Adults
- Enclosure No. 2: Contest Mechanics
- Enclosure No. 3: Research Paper Format
- Enclosure No. 4: Display Guidelines
- Enclosure No. 5: Innovation Expo Display Format
- Enclosure No. 6: Innovation Expo Display Board Format
- Enclosure No. 7: Checkpoints for SRC Review
- Enclosure No. 8: Report Template of the Conduct of the District or School STF
- Enclosure No. 9: List of Forms and Documents Required for Submission in all Levels of Competition
- Enclosure No. 10: Innovation Expo Screening Form
- Enclosure No. 11: Innovation Expo Judges Form
- Enclosure No. 12: End of Activity Report Format for the District Science and Technology Fair
- Enclosure No. 13: Review and Recommendation Report
- Enclosure No. 14: Project Evaluation Form
- Enclosure No. 15: Score Sheets Template

9. Immediate dissemination of this communication is desired.



LYNN G. MENDOZA, EdD

OIC, Schools Division Superintendent 

Encls: As stated

Reference: Regional Memorandum No. 125, s. 2023

To be indicated in the Division Perpetual Index

Under the following subjects

COMPETITION
LEARNERS

LEARNING AREA, SCIENCE
TEACHERS

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Enclosure No. 1: Roles and Responsibilities of Learners and Adults.

STUDENT RESEARCHER

- Understands and abides by the ethical and safety considerations, national laws, and updated rules and regulations set by the NSTF and ISEF in planning and performing STEM research investigations.
- Identifies a research topic/problem and formulates a plan to address the problem.
- Conducts a comprehensive review of related literature about the topic/problem.
- Writes a research plan using the prescribed format. Prepares other documents to support the project plan such as budget plan, timeline of activities, risk assessment, and target deliverables.
- Communicates with qualified scientists from regulated research institutions (RRI) to ask for technical assistance to improve the research plan and request permission to conduct experimentation in the RRI's laboratory/ facility with the supervision of a consultant/laboratory assistant.
- Completes all necessary ISEF forms based on the nature of the chosen research study.
- Secures the original copies of signed ISEF forms and certification from the Scientific Review Committee (SRC), Institutional Review Board (IRB), and/or Institutional Animal Care and Use Committee (IACUC) before starting the research work.
- Records the details of the preliminary research project-related activities, experimentation proper, raw data, and summary of the consultations with the research adviser and qualified scientist/laboratory assistant in a data logbook.
- Performs the experimentation with the guidance of the research adviser and qualified scientist/laboratory assistant.
- Takes necessary and appropriate photo documentation.
- Conducts data analysis with the guidance of the research adviser and/or statistician.
- Writes the research paper following the APA (American Psychological Association) style formatting and citation.
- Chooses the appropriate category that most accurately fits the nature of the study and prepares a brief presentation about the research project.
- Presents the project display poster and answers questions and clarifications from the judges and the public.

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ADULT ADVISOR/SPONSOR

- May be a teacher, parent, professor, and/or a qualified scientist who will directly oversee student researchers throughout the course of the STEM research project.
- Should have a solid background in student research. If not, carry out a literature review to know more about the pre-requisite information regarding the main topic/problem, entities/test subjects, variables, methodologies, and other relevant related literature needed to better understand the rationale and basics of the research project.
- Must be familiar with the safety and ethical considerations, national laws, and updated rules and regulations set by NSTF and ISEF in planning and performing STEM research.
- Orients learners on the following: a) roles and responsibilities of the researcher, advisor (adult sponsor), qualified scientist, and designated supervisor b) adherence to the rules, regulations, and laws.
- Communicates with the parent/guardian of student researchers regarding the rationale of conducting STEM research and the general details on how research activities will be carried out. Secures signed copies of parental/ guardian consent for the participation of learners in the research endeavor.
- Reviews the necessary ISEF forms and research proposals to ensure that learners are abiding by the rules and regulations.
- Ensures the health and safety of learners by identifying potential hazards and evaluating risks involved in all research-related activities with the researchers. Familiarizes learners on how to minimize research-related risks and carry out necessary measures during emergencies.
- Collaborates with RRIs to ask for technical assistance from their pool of experts and permission to use their laboratory facilities. Prepares communication letters, memorandum of understanding/agreement, and other necessary requirements.
- Monitors the conduct of research activities within the projected work plan. Asks relevant questions to researchers before, during, and after experimentation to evaluate and strengthen their understanding of the technical know-how of the research process.
- Allows student researcher consultation during the most convenient time for both parties (learner and adviser).
- Checks the correct usage, syntax, and grammar of the research paper, and display the poster of the student researchers.
- Guides student researcher in choosing the appropriate category that most accurately fits the nature of the study.
- Conducts local oral defense presentations and provides comments and suggestions to further improve the content and delivery of the presentation.

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- Ensures that the learner is physically, emotionally, and mentally ready for the oral defense presentation.

QUALIFIED SCIENTIST

- A qualified scientist should have earned a doctorate degree and/or at least 3 years of extensive experience and expertise in a STEM discipline related to the learner's research investigation.
- Can also serve as the adult sponsor if the abovementioned qualifications are met.
- Is needed for research involving human participants, animals, hazardous chemicals, and/or other PHBAs.
- Must be thoroughly familiar with ethical and safety considerations, national laws, and updated rules set by NSTF and ISEF that relate to the nature of the research project.
- Reviews and provides comments and suggestions to further refine the STEM project proposal. Approves the learner's project plan.
- Reviews and completes the required documentation in the ISEF forms and data logbook.
- May or may not come from the RRI where experimentation is to be conducted; if not from RRI, a separate designated supervisor from the RRI must be present to supervise the experimentation conducted at the RRI.
- Ensures the proper training of student researchers and/ or designated supervisors in carrying out the necessary procedures.

DESIGNATED SUPERVISOR

- Must be familiar with the learner's project and underwent/undergoes relevant trainings related to the area of study of the researcher.
- May also serve as the adult sponsor for the project.
- If the project involved the use of vertebrate animals, the designated supervisor must be well-equipped with the relevant knowledge and skills on proper handling and ethical concerns with the use of the test animals.
- Provides direct supervision during the conduct of the experimentation.
- Reviews and completes the required documentation in the ISEF forms and data logbook.

SCIENTIFIC REVIEW COMMITTEE (SRC)

- An SRC must consist of a minimum of three individuals with at least 3 years of extensive experience and expertise in STEM research projects and/or graduate degrees in STEM-related disciplines, whereas it is recommended to diversify the expertise of the committee (e.g., Life Science research SRC: agronomist, STEM professor/ educator, biomedical scientist).

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- Orientation of SRC members regarding the national laws, safety and ethical considerations, and the rules and regulations set by NSTF and ISEF need to be adhered to in conducting STEM Research Projects.
- Must be thoroughly familiar with ethical and safety considerations, national laws, and updated rules and regulations set by NSTF and ISEF.
- Checks and evaluates student research projects, certifications, research plans, documentation, evidence of proper supervision, and project display in compliance with NSTF and ISEF rules, applicable laws and regulations at each level of the STEM fair competitions.

Examines research projects for the following:

- Evidence of literary research
- Evidence of proper supervision
- Consistency of completion of the required information, signatures, and dates in the ISEF forms and data logbook
- Use of accepted and appropriate research methodologies
- Evidence of risk assessment and appropriate literature search and attribution
- Search for alternatives to animal use
- Humane treatment of animals
- Documentation of substantial expansion for continuation projects
- Compliance with ISEF ethics statement

NOTE: To avoid conflict of interest, no adult sponsor, parent, or other relative of the student, qualified scientist, or designated supervisor who oversees the project, may serve on the SRC or IRB reviewing the STEM research projects.

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Enclosure No. 2: Contest Mechanics

ELIGIBILITY

- The competition is open to Grades 9-12 learners of both public and private high schools in the Philippines who have not reached the age of 20 on or before May 1 of the current school year.
- Learners may work individually or in teams with 2-3 members from the same school. Each learner is only allowed to submit one (1) research project in one (1) of the four (4) research categories: Life Science, Physical Science, Robotics and Intelligent Machines, and Mathematics and Computational Sciences. The project should include no more than 12 months of continuous research and should not include research activities performed before January of the previous school year. (e.g., For the school year 2023-2024 with the target opening of classes on August 2023 and ISEF on May 2024, research projects may be accomplished within 1-12 month/s starting from January 2023 to January 2024).
- The top three (3) winners in each category will be screened by the division Scientific Review Committee (SRC) and qualifiers will advance to the Division Science and Technology Fair (DSTF).
- First placers in each category in the Division Science and Technology Fair (DSTF) will be screened by the Regional SRC. The qualifiers will advance to the Regional Science and Technology Fair (RSTF).
- First and second placers in each category in the Regional Science and Technology Fair (RSTF) will be screened by the national SRC. The qualifiers will advance to the National Science and Technology Fair (NSTF).

RESEARCH CATEGORIES

The STEM research competition is divided into four (4) categories. The student researchers and advisor should carefully consider which category best describes the research project. They may enter the competition as an individual or as a team.

Life Science

This category deals with living organisms such as plants, microorganisms, and animals including humans and their life processes. Projects that involve systematic observation, development, experimentation, and understanding of living things and biological processes belong to this category. Subcategories include Animal Sciences, Biomedical and Health Sciences, Cellular and Molecular Biology, Microbiology, Plant Sciences, and Translational Medical Science.

Physical Science

This category deals with the nature and properties of non-living matter, energy and systems. Projects that involve systematic observation,

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development, experimentation, and understanding of materials and phenomena belong to this category. Subcategories include Astronomy, Chemistry, Earth and Environmental Sciences, Energy, Engineering Technology, Statics and Dynamics, Sustainable Materials and Design, Environmental Engineering, Materials Science, and Physics.

Robotics and Intelligent Machines

This category deals with the design, implementation, and use of prime technologies and machine intelligence in providing a wide range of innovative solutions and advancements across multiple disciplines to reduce reliance on human intervention. Subcategories include Biomechanics, Cognitive Systems, Control Theory, Machine Learning, and Robot Kinematics.

Mathematics and Computational Science

Mathematics deals with the measurement, properties, and relationships of quantities and sets using numbers and symbols. Subcategories include Algebra, Analysis, Combinatorics, Graph Theory, Game Theory, Geometry and Topology, Number Theory, and Probability and Statistics.

Computational Science deals with the development and implementation of mathematical models and simulations to understand natural systems and processes and solve STEM problems using computers. Subcategories include Computational Biology and Bioinformatics, Computational Chemistry, Computational Mechanics, and Theoretical, Computational and Quantum Physics.

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Enclosure No. 3: Research Paper Format

I. Research Plan:

This is to be written prior to experimentation following the instructions below to detail the rationale, research questions, methodology, and risk assessment of the proposed research. (This is compiled separately from the rest of the research manuscript.)

All projects 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 or Problem being addressed
- C. Goals/Expected Outcomes/Hypotheses
- D. Procedures: Detail all procedures and experimental design to be used for data collection.
- E. Risk and Safety: Identify any potential risks and safety precautions needed.
- F. Data Analysis: Examine, organize, and interpret data to answer research questions, or either accept or reject hypotheses.
- G. Bibliography: List at least five (5) major references (e.g., science journal articles, books, internet sites) from your literature review using the APA style formatting and citation. If you plan to use vertebrate animals, one of these references must be an animal care reference.

II. Project Data Logbook:

A project data logbook is an organizational tool used by student researchers to organize and record narrative and evidence of the research activities including the planning, research design, drawings/ illustrations, procedures, data collection, analysis and presentation, inferences, and conclusions.

- A. Detailed and accurate notes in paragraphs or bullets show consistency and thoroughness which will be helpful when writing the research paper.
- B. It is also recommended to use hardbound record notebooks instead of spring notebooks to avoid tearing out pages, write entries using permanent pens, and minimize erasures.
- C. Procedures are to be presented in flow charts and data in organized tables. Each data entry (qualitative and quantitative) should also be accurately recorded, dated and signed by the supervising adult (if applicable) during the research activity.
- D. Each data logbook entry should also be dated and signed by the supervising adult (if applicable) during the research activity. If erasures

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cannot be avoided, strike the word, phrase, sentence, or figure or numbers once and countersign each. Avoid using correction tapes and the likes.

III. Research Paper Format:

1. INTRODUCTION - What relevant background information supports your research problem/ questions?
 - ✓ Explain what is known or has already been done in your research area. Include a brief review of relevant literature. If this is a continuation project, a brief summary of your prior research is appropriate here. Be sure to distinguish your previous work from this year's project.
 - ✓ Include a brief description on how your project will address an issue, concern or problem. Explain why this research is important and any societal impact of your research.
2. METHODS - What procedures were carried out for the experimentation?
 - ✓ Explain in detail what you did. What data did you collect and how did you collect those data? Discuss your control group and the variables you tested.
 - ✓ Discuss your control group, the variables you tested, and the statistical treatment used. Handling and disposal of wastes may be included if necessary.
 - ✓ DO NOT include a list of materials.
3. RESULTS - What were the result(s) of your project?
 - ✓ Include tables and figures which illustrate your data.
 - ✓ Include relevant statistical analysis of the data.
4. DISCUSSION - What is your interpretation of these results?
 - ✓ What do these results mean? Compare your results with theories, published data, commonly held beliefs, and expected results.
 - ✓ Discuss possible errors. Did any questions or problems arise that you were not expecting? How did the data vary between repeated observations of similar events? How were results affected by uncontrolled events?
5. CONCLUSIONS - What conclusions did you reach?
 - ✓ What do these results mean in the context of the literature review and other work being done in your research area? How do the results address your research question? Do your results support your hypothesis/hypotheses?
 - ✓ What application(s) do you see for your work?
6. REFERENCES-What are your sources?
 - ✓ This section should not exceed one page. Limit your list to the most important references.
 - ✓ List the references/documentation used which were not of your own creation (i.e., books, journal articles).

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- ✓ Your reference list should be written based on the APA (American Psychological Association) style formatting and citation.

Engineering Project

1. INTRODUCTION - What is your engineering problem and goal?
 - ✓ What problem were you trying to solve? Include a description of your engineering goal.
 - ✓ Explain what is known or has already been done to solve this problem, including work on which you may build. You may include a brief review of relevant literature.
 - ✓ If this is a continuation project, a brief summary of your prior work is appropriate here. Be sure to distinguish your previous work from this year's project.
2. METHODS – What are your methods and procedures for building your design?
 - ✓ Explain what you did. How did you design and produce your prototype? If there is a physical prototype, you may want to include pictures or designs of the prototype.
 - ✓ If you tested the prototype, what were your testing procedures? What data did you collect and how did you collect that data?
 - ✓ DO NOT include a separate list of materials.
3. RESULTS - What were the result(s) of your project?
 - ✓ How did your prototype meet your engineering goal?
 - ✓ If you tested the prototype, provide a summary of testing data tables and figures that illustrate your results.
 - ✓ Include relevant statistical analysis of the data.
4. DISCUSSION - What is your interpretation of these results?
 - ✓ What do these results mean? You may compare your results with theories, published data, commonly held beliefs, and/or expected results.
 - ✓ Did any questions or problems arise that you were not expecting? Were these problems caused by uncontrolled events? How did you address these?
 - ✓ How is your prototype an improvement or advancement over what is currently available?
5. CONCLUSIONS - What conclusions did you reach?
 - ✓ Did your project turn out as you expected?
 - ✓ What application(s) do you see for your work?
6. REFERENCES – What are your sources?
 - ✓ This section should not exceed one page. Limit your list to the most important references.
 - ✓ List the references/documentation used which were not of your own creation (i.e., books, journal articles).

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- ✓ Your reference list should be written based on the APA (American Psychological Association) style formatting and citation.

Mathematics and Computer Sciences Project

1. INTRODUCTION - What is your research question?
 - ✓ Explain what is known or has already been done in your research area. Include a brief review of relevant literature.
 - ✓ If this is a continuation project, a brief summary of your prior work is appropriate here. Be sure to distinguish your previous work from this year's project.
2. FRAMEWORK – What is your framework?
 - ✓ Introduce the concepts and notation needed to specify your research question, methods, and results precisely.
 - ✓ Define relevant terms, and explain prior/ background results. (Novel concepts developed as part of your project can be presented here or in Section 4, as appropriate.)
3. FINDINGS – What are your findings and supporting arguments?
 - ✓ What did you discover and/or prove? Describe your result(s) in detail. If possible, provide both formal and intuitive/verbal explanations of each major finding.
 - ✓ Describe your methods in general terms.
 - ✓ Present rigorous proofs of the theory results – or, if the arguments are long, give sketches of the proofs that explain the main ideas.
 - ✓ For numerical/statistical results, include tables and figures that illustrate your data. Include relevant statistical analysis. Were any of your results statistically significant? How do you know this?
4. CONCLUSIONS - What is your assessment of your findings?
 - ✓ How do the results address your research question? And how have you advanced your readers' understanding relative to what is already known?
 - ✓ Discuss possible limitations. Did any questions or problems arise that you were not expecting?
 - ✓ What challenges do you foresee in extending your results further?
 - ✓ What application(s), if any, do you see for your work?
5. REFERENCES – What are your sources?
 - ✓ This section should not exceed one page. Limit your list to the most important references.
 - ✓ List the references/documentation used which were not of your own creation (i.e., books, journal articles).

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- ✓ Your reference list should be written based on the Chicago Manual of Style. For more information, you may visit the websites below:

- <http://www.chicagomanualofstyle.org/home.html>
- <http://www.calvin.edu/library/knightcite/index.ph>

IV. Abstract:

The abstract should be 250 words or less. Do not discuss specific aspects of the research in great detail, including experimental procedures and statistical methods. Any information that is unnecessary to include in a brief explanation should be saved for the written research paper or the project exhibit board.

If the project is a continuation from a previous year, the abstract should only summarize the current year's work. If it is necessary to mention supporting research from previous year(s), it must be minimal.

If the abstract text includes special characters, such as mathematical symbols, which can't be translated electronically, spell out the symbol.

Do not include acknowledgements in the abstract. There should be no references to mentors, institutional facilities, and awards or patents received.

Title

- ✓ Finalist's Name (or names, if a team project)
- ✓ School Name, City and Region

Purpose

- ✓ An introductory statement providing background or the reason for investigating the project topic.
- ✓ A statement of the problem the research is looking to solve or the questions being tested.

Procedure

- ✓ A brief overview of how the investigation was conducted, highlighting key points, and including methods and resources used.
- ✓ Do not provide details about materials used in the research unless they greatly influenced the procedure or were needed to conduct the investigation.
- ✓ An abstract should only include procedures done by the finalist. Do not include work done by a mentor (such as surgical procedures) or work done prior to the Finalist's involvement.

Observations/Data/Results

- ✓ This section should provide key results that lead directly to the conclusions.
- ✓ Do not include unnecessary data or observations about the results, nor tables, charts, graphs or other images. While these belong in the research paper or the project board, they do not belong in the formal ISEF abstract.
- ✓ Unless significant, do not include any of the experimental design difficulties encountered in research.

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Conclusions

- ✓ This section should be confined to a short summary in 1-2 sentences. It is a reflection on the research process and results, which may include conclusive ideas, important applications, and implications of the research.
- ✓ The ISEF abstract does not include a bibliography. ISEF requires the bibliography as part of the research plan to be provided on Form 1A.

Ethics Statement. Scientific fraud and misconduct is not condoned at any level of research or competition. Plagiarism, use or presentation of other research's work as one's own and fabrication of data will not be tolerated. Fraudulent projects are disqualified from the competition.

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Enclosure No. 4: Display Guidelines

Display Guidelines

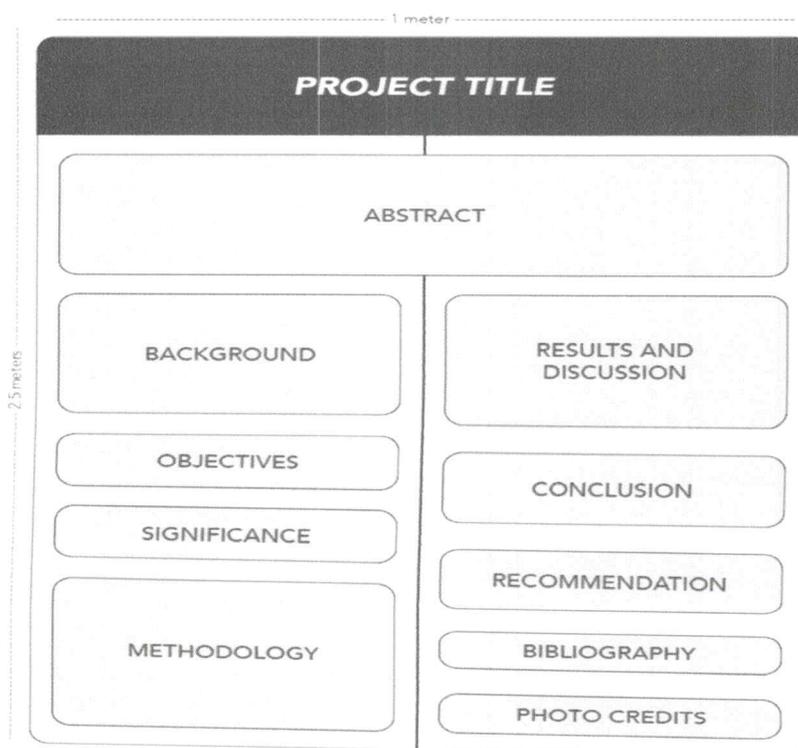
The project display using photo paper summarizes the research project and must focus on the proponent's work for this year's study, and if applicable, with only minimal reference to previous research. Tarpaulins will not be used in any level of Science Fair competition in support of the environmental advocacy of the government in reducing the consumption of non-biodegradable or non-recyclable materials.

The safety regulations that must adhere to or should be consistent with the guidelines set by the International Science and Engineering Fair (ISEF).

The following items should be seen in the project display: Abstract, Background, Objectives, Significance, Methodology, Results and Discussion, Conclusion, Recommendations, Bibliography, and if applicable, Photo Credits (including illustrations and graphics).

Physical Project Board Dimension:

The dimensions of the project board may not exceed 2.5 m high and 1m wide.



Research Logbook:

These forms do NOT need to be in this particular order, just present in the logbook.

1. Signed ISEF Abstract
2. Signed Checklist for Adult Sponsor Form 1

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3. Student Checklist Form 1A
4. Research Plan
5. Signed Approval Form 1B
6. All other pertinent ISEF forms

Photography/Images:

Other Safety Restrictions:

Display of photographs other than that of the learner/s MUST have a photo release signed by the subject, and if under 18, also by the guardian of the subject.

Any photographs, visual image, chart, table, and/or graph is allowed if:

1. Any inadequately insulated apparatus producing extreme temperatures that may cause physical burns is not allowed.
2. Any apparatus with unshielded belts, pulleys, chains, or moving parts with tension or pinch points must be for display only.
3. Project sounds, lights, odors or any other display items must not be distracting.
4. The Display & Safety Committee, and/or the Scientific Review Committee at various level of the Science Fair reserve the right to remove any project for safety reasons or to protect the integrity of the NSTF and its rules and regulations.
5. It is not deemed offensive or inappropriate (which includes images/photos showing vertebrate animals/ humans in surgical, necrotizing, or dissection situations) by the SRC, Display & Safety Committee.
6. It has a credit line of origin.
7. If it is from the Internet, magazine, newspaper, journal, etc., and a credit line is attached.
8. It is a photograph or visual depiction of the finalist.
9. It is a photograph or visual depiction for which a signed consent form is at the project.
10. Images used as backgrounds must also be credited.

Items NOT Allowed to be Displayed with the Project:

1. Awards, medals, business cards, flags, logos, CDs, DVDs, flash drives, brochures, booklets, endorsements, giveaway items and/or acknowledgements (graphic or written) unless the item(s) are an integral part of the project.
2. Postal addresses, Internet, email, and/or social media addresses, QR codes, telephone, and/or fax numbers of a student.
3. Active internet or email connections as part of the display or operating the project.

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Safety Guidelines

Items NOT Allowed at the Project Display:

1. Living organisms, including plants
2. Soil, sand, rock, and/or waste samples, even if permanently encased in acrylic
3. Taxidermy specimens or parts
4. Preserved vertebrate or invertebrate animals
5. Human or animal food
6. Human or animal parts or body fluids
7. Plant materials (living, dead or preserved) that are in their raw, unprocessed or non-manufactured state (Exception: manufactured construction materials used in building the project or display)
8. All chemicals including water
9. All hazardous substances or devices (i.e.: poisons, drugs, firearms, weapons, ammunition, reloading devices, lasers, etc.)
10. Dry ice or other sublimating solids
11. Sharp items (i.e.: syringes, needles, pipettes, knives, etc.)
12. Flames or highly flammable materials
13. Batteries with open-top cells
14. Glass or glass objects unless deemed by the Display & Safety Committee to be an integral and necessary part of the project
15. Lasers or laser pointers
16. Any apparatus deemed unsafe by the Scientific Review Committee, the Display & Safety Committee of the Fair

Other Safety Restrictions:

1. Any inadequately insulated apparatus producing extreme temperatures that may cause physical burns is not allowed.
2. Any apparatus with unshielded belts, pulleys, chains, or moving parts with tension or pinch points must be for display only.
3. Project sounds, lights, odors or any other display items must not be distracting.
4. The Display & Safety Committee, and/or the Scientific Review Committee in various level of the Science Fair reserve the right to remove any project for safety reasons or to protect the integrity of the NSTF and its rules and regulations.

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Enclosure No. 5: Innovation Expo Display Format

Title Page and Table of Contents: The title page and table of contents allow the reader to follow the organization of the paper quickly.

Introduction:

1. Features and Specifications – This describes the details of your invention.
2. Market Trends and Opportunities – This part of the report must include three items: what inspired you to develop this invention, an explanation of what problem your invention will solve, and provide supporting details that your invention does not exist yet. Explain what products are already on the market that are somewhat like your invention and describe how yours differs.

Materials and Methods: Describe in detail how you made your invention. Explain what materials were used and how you put them together to make your invention. Your report should be detailed enough so that someone would be able to repeat the steps and make your invention. Directions on how to use the invention are also necessary here. You must include a detailed drawing(s) of your invention.

Results and Discussion: This is the essence of your paper. Compare your results with theoretical values, published data, literature and related studies, commonly held beliefs, and/or expected results. Include a discussion of possible errors, statistics, graphs, pages with your raw collected data, etc. How did the data vary between repeated observations of similar events? How were your results affected by uncontrolled events? What would you do differently if you repeated this project? What other experiments should be conducted?

Conclusions: This discusses the potential applications, possible customer benefits, and the impact of innovation in solving problems and issues of today and tomorrow.

Acknowledgments: This part gives credit to those who have assisted you, including individuals, businesses, and educational or research institutions.

References/Bibliography: Your reference list should be written based on the APA (American Psychological Association) style formatting and citation.

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Enclosure No. 6: Innovation Expo Display Board Format

Title	Create a clear and attention-grabbing title that accurately reflects your innovation.
Introduction	Provide a brief introduction to your innovation, highlighting its purpose and significance.
Problem Statement	Clearly state the problem or challenge that your innovation addresses.
Solution/ Innovation	Describe your innovative solution concisely and prominently on the poster.
Features and Specifications	Present the key features and specifications of your innovation using bullet points or visuals.
Materials and Methods	Use simple visuals or graphics to illustrate the materials used and the steps in the development process.
Results and Discussion	Showcase the results of your innovation and compare them to expectations or existing solutions. Use graphs, charts, or infographics to present data effectively.
Benefits	Emphasize the potential benefits of your innovation to the target users or the community.
Visuals	Include images, diagrams, and photographs to enhance the visual appeal and understanding of your innovation.
Conclusions	Summarize the main conclusions and the broader implications of your innovation.
Future Development	Discuss potential future developments or applications of your innovation.
Developers' Name	Indicate the name/s of the proponent/s (Do not indicate the name of the school/region)

Specifications: Each Display Board must have a 38" x 48" dimensions (portrait style)

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Enclosure No. 7: Checkpoints for SRC Review

TYPE OF FORM	WHO WILL FILL OUT?	WHEN TO FILL OUT?	WHEN IS IT REQUIRED?
Form 1 - Checklist for Adult Sponsor	Research Adviser	Before experimentation	Required for all projects
Form 1A - Student Checklist	All student researchers	Before experimentation	Required for all projects
Form 1B - Approval Form	All student researchers	Before experimentation	Required for all projects
Research Plan/Project Summary	All student researchers	Before experimentation	Required for all projects
Form 1C - Regulated Research Institution/Industrial Setting Form	Adult supervising	After experimentation	Required if research is conducted in a regulated research institution, industrial setting or any work site other than home, school or field
Form 2 - Qualified Scientist Form	Qualified Scientist/Adult Supervising	Before experimentation	Required if research involves human participants, vertebrate animals, potentially hazardous biological agents and hazardous
Form 3 - Risk Assessment Form	Student Researcher/s Qualified Scientist/ Adult Supervising	Before experimentation	Required for all projects
Form 4 - Human Participants Form	Student Researcher/s Institutional Review Board	Before experimentation	Required if research involves human participant

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			<i>*If in a regulated research institution, use institutional approval forms</i>
Form 4A – Human Informed Consent Form	Student Researcher/s Research Participant	Before experimentation	Required if research involves human participant
Form 5A – Vertebrate Animal Form	Student Researcher/s Scientific Review Committee Veterinarian Designated Supervisor/Qualified Scientist	Before experimentation	Required for all research involving vertebrate animals that is conducted in a school/home/field research site
Form 5B – Vertebrate Animal Form	Student Researcher/s Qualified Scientist	Before experimentation	Required for all research involving vertebrate animals that is conducted in Regulated Research Institution
Form 6A – Potentially Hazardous Biological Agents Risk Assessment Form	Student Researcher Qualified Scientist/Designated Supervisor Scientific Review Committee	Before experimentation	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.
Form 6B – Human and	Student Researcher Qualified	Before experimentation	Required for research involving

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Vertebrate Animal Tissue	Scientist/Designated Supervisor		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.
Form 7 – Continuation / Research Progression Projects Form	Student Researcher	Before experimentation	Required for projects that are a continuation/ progression in the same field of study as previous project.

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Enclosure No. 8: Report Template of the Conduct of the District/ School STF

The consolidated report of the conduct of the STF must be submitted to the National Science and Technology Fair Technical Working Group before the conduct of the National Level Science Fair. The report should include the following:

1. **Title**
2. **Table of Contents**
3. **Introduction/Rationale**
4. **Detailed Information**
 - ✓ General information
 - ✓ SRC Deliberation (include the results, findings and recommendations)
 - ✓ Program of Activities (day-to-day activities)
 - ✓ List of Entries (include a brief profile of the research adviser of each entry)
 - ✓ List of Winners (Research & Innovation Congress)
 - ✓ Trend Analysis (results from 3 consecutive years)
 - ✓ Financial Report
5. **Conclusions**
6. **Recommendations**
7. **Appendix**

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Enclosure No. 9: List of Forms and Documents Required for Submission in all Levels of Competition

The following are the forms and manuscripts to be submitted in ALL levels of the competition:

1. Research Plan

2. Forms for all the Projects

- ✓ Checklist for Adult Sponsor
- ✓ Student Checklist (1A)
- ✓ Research Plan (NOTE: No need to attach the Research Plan Instructions)
- ✓ Approval Form (1B)
- ✓ Regulated Research Institutional/Industrial Setting Form (1C)

3. Forms depending on the type of research (e.g. involving humans, vertebrate animals, hazardous chemicals, etc.

- ✓ Qualified Scientist Form (2)
- ✓ Risk Assessment Form (3)
- ✓ Human Participants Form (4)
- ✓ Human Informed Consent Form
- ✓ Vertebrate Animal Form (5A)
- ✓ Vertebrate Animal Form (5B)
- ✓ Potentially Hazardous Biological Agents Risk Assessment Form (6A)
- ✓ Human and Vertebrate Animal Tissue Form (6B)
- ✓ Continuation Project Form (7)

4. Abstract (Maximum of 250 words) The abstract should include the following:

- ✓ Purpose of the experiment
- ✓ Procedure
- ✓ Data conclusion
- ✓ The abstract may NOT include the following:
 - Acknowledgement
 - Work of procedures done by the mentor

5. Research Paper

6. Project Evaluation Form

7. Scanned copy of the log book in PDF format

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Enclosure No. 10: Innovation Expo Screening Form

TITLE OF THE PROJECT:		
INDIVIDUAL/TEAM:		
PROJECT PROPONENT/S:		
CRITERIA	WEIGHT	RATING
ORIGINALITY AND CREATIVITY This criterion assesses the uniqueness and innovation of the project. It looks at how the research addresses a problem in a novel way or introduces creative solutions.	35%	
COMMUNITY CONNECTION & IMPACT This criterion evaluates how the innovation research benefits the community or society. It assesses the project's potential to make a positive impact and address real-world issues.	25%	
MARKET ATTRACTIVENESS This criterion examines the commercial viability of the innovation. It considers the potential market demand, scalability, and sustainability of the project.	25%	
UTILIZATION OF PATENT INFORMATION This criterion focuses on how well the project utilizes relevant patent information and avoids infringement on existing patents.	15%	
TOTAL:	100%	
COMMENTS:		

 Signature Over Printed Name
 Date Signed:

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Enclosure No. 11: Innovation Expo Judges Form

TITLE OF THE PROJECT:		
INDIVIDUAL/TEAM:		
PROJECT PROPONENT/S:		
CRITERIA	WEIGHT	RATING
<p>ORIGINALITY AND CREATIVITY This criterion assesses the uniqueness and innovation of the project. It looks at how the research addresses a problem in a novel way or introduces creative solutions.</p>	25%	
<p>COMMUNITY CONNECTION & IMPACT This criterion evaluates how the innovation research benefits the community or society. It assesses the project's potential to make a positive impact and address real-world issues.</p>	20%	
<p>MARKET ATTRACTIVENESS This criterion examines the commercial viability of the innovation. It considers the potential market demand, scalability, and sustainability of the project.</p>	15%	
<p>FUNCTIONALITY AND TECHNOLOGY VALIDATION This criterion evaluates the practical functionality and performance of the innovation. It assesses how well the innovation functions in real-world scenarios and whether it meets the intended objectives. Researchers should demonstrate evidence of successful testing, validation, or prototypes to support the claims of the innovation's effectiveness.</p>	25%	
<p>PRESENTATION AND PRODUCT PRESENTATION This criterion looks at how effectively the innovation and research are presented to the audience. It assesses the clarity, coherence, and visual appeal of the poster display and any supplementary materials. Additionally, researchers' ability to communicate the innovation's key features, benefits, and impact in a compelling and engaging manner is considered. The criterion also considers how well the researchers answer questions and engage with expo attendees during their presentation.</p>	15%	
TOTAL:	100%	
COMMENTS		

Signature Over Printed Name
Date Signed:

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Enclosure No. 12: End of Activity Report Format for the District Science and Technology Fair

The End of Activity Report for the District Science and Technology Fair should contain the following sections:

1. **Title Page:** Include the name of the district and a clear, concise title for the report.
2. **Table of Contents:** List all the sections of the report and their corresponding page numbers to help readers navigate the document.
3. **General Information:** Provide a broad overview of the fair, including its purpose, goals, and objectives, as well as information on its structure, participants, and timeline.
4. **Results:** Present the results of the fair, including statistics and data related to the number of entries, participants, and winners, as well as any trends or patterns observed.
5. **List of Activities Conducted:** Provide a detailed list of the activities conducted during the fair, including dates, locations, and participants.
6. **List of Entries:** Provide a list of all entries submitted to the fair, including the title, author, and category.
7. **List of Winners:** List the winners of the fair, including the title, author, and category.
8. **Financial Report:** Provide a detailed financial report of the fair, including expenditures and income, as well as any funding sources.
9. **Conclusions:** Summarize the main findings and conclusions of the fair, and provide recommendations for future action.
10. **Recommendations:** Provide specific recommendations for future action, based on the findings of the fair, and identify areas for improvement.
11. **Appendix:** Include any additional materials, such as detailed data tables, charts, or other relevant documents, that support the findings of the report.

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Enclosure No. 13: Review and Recommendation Report

Project Title: _____

Fair Division: Life Science Physical Science Robotics and Intelligent Machines
 Mathematics and Computational Science

Category: Individual Team

Instruction: Please put a check in the appropriate column and if necessary, write recommendations on the space provided.

PART 1: REQUIRED FORMS FOR ALL RESEARCHES	COMPLETE	INCOMPLETE	RECOMMENDATIONS
1. Checklist for Adult Sponsor (1). Is it accomplished and signed?			
2. Student Checklist 1A. Is it complete and signed?			
If answer to item 5 is YES , must also have Form 7 (See Part II, item 13 below)			
If answer to item 7 is Research Institution or Other , must also have Form IC (See Part II, item 6 below)			
3. Research Plan. (Attachment to item 2 above). Does it include the following:			
A. Rationale. Does it include a synopsis of background information that supports the research problem and explains why the research is important scientifically? If applicable, does it explain the societal impact of the research?			
B. HYPOTHESIS(ES), RESEARCH QUESTION(S), ENGINEERING			

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<p>GOAL(S), EXPECTED OUTCOMES. Is this based on RATIONALE?</p>			
<p>C. RESEARCH METHODS AND CONCLUSIONS.</p> <p>a. Procedures.</p> <p>i. Does it show all procedures and experimental designs, including methods for data collection?</p> <p>ii. There should be NO inclusion of work of mentor or others.</p> <p>iii. Parameters should NOT be too strict to allow for possible changes.</p> <p>b. Risk and Safety. Does it identify all potential risks and safety precautions needed?</p>			
<p>c. Data Analysis.</p> <p>i. Does it describe all procedures for data analysis?</p> <p>ii. Parameters should NOT be too strict to allow for possible changes.</p>			
<p>D. BIBLIOGRAPHY.</p> <p>Does it have at least 5 major references? If using vertebrate animals, include 1 reference on animal care. (American Psychological Association)</p>			
<p>Note: Items 3. E-H are needed ONLY for research on HUMAN PARTICIPANTS, VERTEBRATE animals, and POTENTIALLY</p>			

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HAZARDOUS BIOLOGICAL AGENTS (see attached Research Plan/Project Summary Instructions)

<p>E. HUMAN PARTICIPANTS RESEARCH. Does it provide for the following?</p> <ul style="list-style-type: none"> a. Description b. Recruitment c. Methods d. Risk Assessment e. Protection of Privacy f. Informed Consent Process 			
<p>F. VERTEBRATE ANIMAL RESEARCH. Does it provide for the following?</p> <ul style="list-style-type: none"> a. Potential ALTERNATIVES to vertebrate animal use b. Potential impact or contribution of research c. Detailed procedures d. Detail animal numbers, strain, sex, age, source, etc. e. Describe housing and oversight of daily care f. Disposition of animals at study termination 			
<p>G. POTENTIALLY HAZARDOUS BIOLOGICAL AGENTS RESEARCH. Does it provide for the following?</p> <ul style="list-style-type: none"> a. Biosafety Level (BSL) Assessment and Determination 			

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b. Source of agent, specific cell line.			
c. Safety precautions			
d. Methods of disposal			
4. Approval Form 1B (for ALL students)			
5. Abstract			

VERY IMPORTANT: See Part II, Risk Assessment (3) for

- Studies involving protists, archaea, and similar microorganisms.
- Research using manure for composting, fuel production, or other non-culturing experiments.
- Commercially available color change coliform water test kits. These kits must remain sealed and must be properly disposed of.
- Studies involving decomposition of vertebrate organisms (such as in forensic projects).
- Studies with microbial fuel cells.

PART 2: ADDITIONAL REQUIRED FORMS	COMPLETE	INCOMPLETE	RECOMMENDATIONS
<p>6. Regulated Research Institutional or Industrial Setting Form (1C). Must be completed AFTER experimentation by the adult supervising the student research conducted in a regulated research institution or any work site aside from home, school or field.</p> <p>Is it properly accomplished and signed by the DESIGNATED SUPERVISING ADULT?</p>			
<p>7. Qualified Scientist Form (2) - for researches with human participants, vertebrate animals, potentially hazardous biological agents, Drug Enforcement Administration (DEA)-controlled substances; completed and signed BEFORE start of experimentation.</p>			

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<p>Is it properly accomplished and signed by the QUALIFIED SCIENTIST?</p>			
<p>8. Risk Assessment Form (3) – for researches using hazardous chemicals, activities or devices and microorganisms exempt from pre-approval. Must be completed BEFORE experimentation.</p> <p>Is it properly accomplished and signed by DESIGNATED SUPERVISING ADULT OR QUALIFIED SCIENTIST (when applicable)?</p>			
<p>9. Human Participants Form (4) – for researches involving human participants not at a Regulated Research Institution.</p> <p>Did the DESIGNATED ADULT SUPERVISOR/INSTITUTION approve the research BEFORE experimentation?</p>			
<p>10. Vertebrate Animal Form (5A) – for researches involving vertebrate animals that is conducted in a school/home/ field research site.</p> <p>Is it properly accomplished, approved and signed by SRC BEFORE experimentation?</p> <p>Is it properly accomplished, approved and signed by DESIGNATED VETERINARIAN BEFORE experimentation?</p> <p>Is it properly accomplished, approved and signed by DESIGNATED SUPERVISOR OR QUALIFIED SCIENTIST (as applicable) BEFORE experimentation?</p>			

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<p>11. Vertebrate Animal Form (5B) – for researches involving vertebrate animals that is conducted at a Regulated Research Institution.</p> <p>Does it have IACUC approval BEFORE experimentation?</p> <p>Is it properly accomplished, approved and signed by a QUALIFIED SCIENTIST/ PRINCIPAL INVESTIGATOR?</p>			
<p>12. Potentially Hazardous Biological Agents Risk Assessment Form (6A) – for researches 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.</p> <p>A. Does it have SRC/IACUC/ Institutional Biosafety Committee (IBC) approval BEFORE experimentation?</p> <p>B. Is it properly accomplished, approved and signed by a QUALIFIED or DESIGNATED SUPERVISOR BEFORE experimentation?</p> <p>C. Is it properly accomplished, approved and signed by the SRC BEFORE experimentation?</p> <p>D. Human Vertebrate Animal Tissue Form (6B) – for researches involving fresh/ frozen tissue (including primary cell lines, human and other primate</p>			

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<p>established cell lines and tissue cultures), blood, blood products and body fluids. If research involves living organisms, ensure that the proper human or animal forms are completed. All researches using any tissue listed above must also complete Form 6A. Is it properly accomplished, approved and signed by a QUALIFIED or DESIGNATED SUPERVISOR BEFORE experimentation?</p>			
<p>13. Continuation/Research Progression Projects Form (7) – for researches that are a continuation/progression in the same field of study as a previous research.</p> <p>A. This form MUST be accompanied by the PREVIOUS YEAR'S ABSTRACT and RESEARCH PLAN</p> <p>B. Is it properly accomplished, approved and signed by the student/s?</p>			

PART 3: RESEARCH PAPER (See attached IMRAD Format)	COMPLETE	INCOMPLETE	RECOMMENDATIONS
<p>1. COVER PAGE</p> <p>A. Is the research title present?</p> <p>B. Part 3 1 B: Is/Are the name/s of the student proponent/s present?</p> <p>C. Is/Are the appropriate persons credited? (The Research adviser and Research Consultants, if applicable MUST be present)</p>			
<p>2. INTRODUCTION</p>			

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Does it outline the research question and its significance within the topic discussed, making its relevance clear to readers in a CONCISE manner?			
3. METHOD Does it clearly and comprehensively provide the reader with a description of the methods used in the research?			
4. RESULTS Does it clearly and comprehensively SHOW the reader what the research came up with? This should be the MAIN section of the paper.			
5. DISCUSSION Does this show what the findings in RESULTS mean?			
6. LIMITATIONS ON THE RESEARCH DESIGN AND MATERIAL Does this show knowledge and understanding of research limitations?			
7. CONCLUSION, NOTES, WORKS CITED AND APPENDICES/BIBLIOGRAPHY A. Does the conclusion briefly and clearly analyze what the paper proposed, discussed and concluded? B. Are there (in MLA format) possible Researcher Notes, the research paper's Works Cited, and Appendices?			

PART 4: RESEARCH ABSTRACT (MAX. 250 WORDS)	COMPLETE	INCOMPLETE	RECOMMENDATIONS
1. Does it clearly and concisely state the PURPOSE OF			

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THE RESEARCH?			
2. Does it clearly and concisely state the PROCEDURE/S undertaken in the RESEARCH?			
3. Does it clearly and concisely state the DATA collected from the RESEARCH?			
4. Does it clearly and concisely state the CONCLUSIONS OF THE RESEARCH?			
<p>VERY IMPORTANT: There should be NONE of the following:</p> <p>a. Acknowledgements of the research institutions and/or mentors with which the student were working</p> <p>b. Self-promotions and external endorsements</p> <p>c. Inclusion of work or procedures done by the mentor</p>			

PART 5: RESEARCH LOGBOOK	COMPLETE	INCOMPLETE	RECOMMENDATIONS
1. Is the logbook intact and not tampered with? It should NOT be loose-leafed.			
2. Does the START DATE in the logbook match the START DATE in Student Checklist (1A)?			
3. Does the END DATE in the logbook match the END DATE in Student Checklist (1A)?			
4. Are all the entries in the			

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logbook properly dated?			
5. Does the logbook show accurate and detailed notes and findings throughout the course of the research? Does it include data tables, and the like?			
6. Does the logbook show accurate and detailed description of procedures and processes conducted in the course of the research?			
7. Does the logbook show student notes and questions in the course of the research?			

Qualified Disqualified

Reviewed by: _____ Date: _____

Reason/s for Disqualification:

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Enclosure No. 14: Project Evaluation Form

Title of Research Project: _____ **Code** _____

Fair Division: Life Science Physical Science Robotics and Intelligent Machines

Mathematics and Computational Science

Category: Individual Team

CATEGORY	SCORE
<p>1. CREATIVE ABILITY (30)</p> <p>1. Does the project show creative ability and originality in the:</p> <p>a. questions asked?</p> <p>b. approach to solving the problem?</p> <p>c. analysis of the data?</p> <p>d. interpretation of the data?</p> <p>e. use of equipment?</p> <p>f. construction or design of new equipment</p> <p>2. Creative research should support an investigation and help answer a question in an original way.</p> <p>3. A creative contribution promotes an efficient and reliable method for solving a problem. When evaluating project, it is important to distinguish between gadgeteering and ingenuity.</p>	
<p>2. SCIENTIFIC THOUGHT (30)</p> <p>1. Is the problem stated clearly?</p> <p>2. Was the problem sufficiently limited to allow plausible approach? Good scientists can identify important problems capable of solutions.</p> <p>3. Was there a procedural plan for obtaining a solution?</p> <p>4. Are the variables clearly recognized and defined?</p> <p>5. If controls were necessary, did the student recognize their need and were they used correctly?</p> <p>6. Are there adequate data to support the conclusions?</p> <p>7. Does the finalist/team recognize the data's limitations?</p> <p>8. Does the finalist/team understand the project's ties to related research?</p> <p>9. Does the finalist/team have an idea of what further research is warranted?</p> <p>10. Did the finalist/team cite scientific literature, or only popular literature (e.g. local newspapers, Readers Digest)?</p> <p>ENGINEERING GOALS</p> <p>1. Does the project have a clear objective?</p> <p>2. Is the objective relevant to the potential user's needs?</p> <p>3. Is the solution: workable? Acceptable to the potential user? Economically feasible?</p> <p>4. Could the solution be utilized successfully in design or construction of an end product?</p> <p>5. Is the solution a significant improvement over previous alternatives or application?</p>	

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<p>6. Has the solution been tested for performances under the conditions of use?</p>	
<p>3. THOROUGHNESS (15)</p> <ol style="list-style-type: none"> 1. Was the purpose carried out to completion within the scope of the original intent? 2. How completely was the problem covered? 3. Are the conclusions based on a single experiment or replication? 4. How complete are the project notes? 5. Is the finalist/team aware of other approaches or theories? 6. How much time did the finalist or team spend on the project? 7. Is the finalist/team familiar with scientific literature in the studied field? 8. Are the relevant details (including the pages and dates) of the experiment recorded in the research data logbook? 	
<p>4. SKILL (15)</p> <ol style="list-style-type: none"> 1. Does the finalist/team have the required laboratory, computation, observational and design skills to obtain the supporting data? 2. Where was the project performed (i.e. home, school laboratory, university laboratory) 3. Did the student or team receive assistance from parents, teachers, scientists or engineers? 4. Was the project completed under adult supervision, or did the student/team work largely alone? 5. Where did the equipment come from? Was it built independently by the finalist or team? 6. Was it obtained on loan? Was it part of a laboratory where the finalist/team worked? 	
<p>5. CLARITY (10)</p> <ol style="list-style-type: none"> 1. How clearly does the finalist or team discuss his/her/their project and explain the purpose, procedure, and conclusions? Watch out for memorized speeches that reflect little understanding of principles. 2. Does the written material reflect the finalist's or team's understanding of the research? 3. Are the important phases of the project presented in an orderly manner? 4. How clearly is the data presented? 5. How clearly are the results presented? 6. How well does the project display explain the project? 7. Was the presentation done in a forthright manner, without tricks or gadgets? <p>Did the finalist/team perform all the project work, or did someone help?</p>	
<p>TOTAL</p>	
<p>Signature Over Printed Name of Judge</p>	

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Enclosure No. 15: Score Sheets Template

**DIVISION SCIENCE AND TECHNOLOGY FAIR
BOARD OF JUDGES - INDIVIDUAL SCORE SHEET
CATEGORY: _____**

CODE	RESEARCH PROJECT TITLE	CRITERIA					TOTAL:
		CREATIVE ABILITY 30	SCIENTIFIC THOUGHT 30	THOROUGHNESS 15	SKILL 15	CLARITY 10	

(Signature over printed name)
Judge

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