Ma'am Ana Marie CID

Republic of the Philippines
Department of Education
REGION III
SCHOOLS DIVISION OF PAMPANGA

August 17, 2026

DIVISION MEMORANDUM
No. 490 s. 2026

2026 DIVISION SCIENCE AND TECHNOLOGY FAIR (DSTF)

To: Assistant Schools Division Superintendents
Chief Education Supervisors
Education Program Supervisors & Public Schools District Supervisors
Public Elementary & Secondary School Heads
Special Science Elementary Schools (SSES) & Secondary Schools (STE) Coordinators
District Science Coordinators & Cluster Leaders
Senior High School Coordinators
All Others Concerned

1. In line with the Department of Education's thrust to promote scientific literacy and innovation among learners and pursuant to DM No. 016, s. 2025, this Office announces the conduct of the **2026 Division Science and Technology Fair (DSTF)** on **October 10, 2026**, at **Potrero National High School.**

2. The activity aims to:
   a. showcase learners' scientific and technological talents and outputs;
   b. promote inquiry-based learning and research culture in schools, STEM awareness and interest among learners, teachers, and the public; and
   c. identify the best researcher to represent the Division at the Regional Science and Technology Fair (RSTF).
3. This year features two (2) major activities namely:
   a. **Tuklas:** *A Research Project Fair*- A STEM research competition that provides opportunities for Junior and Senior High School learners to showcase their research projects based on their field of interest and/or real-world problems, issues, and concerns.

   b. **Innovation Expo:** *GAWAD AgLiTekno* - A Technology Innovation competition that aims to recognize the most creative and market-viable project addressing major issues in food safety, water conservation, renewable energy, cyber security, road safety, health, disaster mitigation, agriculture, and environment

4. The schools may conduct its own selection and screening process for their entries and participants in the **Cluster-Level Science and Technology Fair competition**. The school and/or district-based activity shall be conducted strategically to avoid any **disruption of classes**.

5. The Cluster Coordinators are encouraged to coordinate closely with **school heads** to facilitate the smooth endorsement of entries and ensure timely submission. Organize

and facilitate the cluster-level competition, including venue, schedule, judges, logistics, and ensure fair and transparent judging and documentation of results.

6. The **School and Cluster-Level Science Technology Fair Competition** will be held on **September 2-4 & 7-8, 2026**, with venues to be determined in coordination with **school heads within each cluster** and will feature participants who are **winners from the school-level Science and Technology Fair**. The **top five (5) winners per category** from each of the seven clusters will be **endorsed to the Division Office** for **validation and screening** on **September 14-17, 2026.** The validation and screening will be held on **September 24, 2026,** venue and process will be announced.

7. Cluster Coordinators are requested to **submit the official list of winners**, along with complete documentation (entry forms, judging sheets, photos, and reports), to the Division Science Coordinator on or before **September 14-17, 2026**.

8. This process ensures that all entries meet the standards and requirements set for the **Division Science and Technology Fair (DSTF)**, and that the most outstanding projects are given the opportunity to represent their clusters at the division level.

9. The official participants in the cluster level competition are the **first-place school winners** per **category** and from each cluster at the **Division Science Technology Fair (DSTF)** shall only be the entries that have been approved by the **Division Scientific Review Committee (DSRC)** from the **top 5 cluster winners** per **category.** Substitute shall not be allowed. The description and the maximum number of official participants are the following:

Number of Student Participants per School			
Life Science Category (3-4)		***Robotics and Intelligent Machines Category (3-4)***	
Individual	1	Individual	1
Team	max of 3	Team	max of 3
Physical Science Category (3-4)		***Mathematics and Computational Science Category (4)***	
Individual	1	Individual	1
Team	max of 3	Team	2-3
Science Innovation Expo (4)			
Individual		1	
Team		max of 3	

10. Secondary school heads are requested to inform their cluster science department heads or science leaders, STE Program Coordinators, STE research teachers, SHS research teachers, and potential research advisers on the 2026 DSTF Online Orientation Meeting on **August 21, 2026, at 2:00 PM.** The MS Teams link will be sent through the official group chat and email of the participants before the scheduled meeting.

11. The judges shall be selected based on their expertise in science, research, and innovation and will be announced once finalized to ensure a fair and credible evaluation of student research-outputs.

12. Each participating school is shall pay a **registration fee of P500.00** charged against local available funds subject to usual accounting and auditing rules and regulations. This fee will be used to cover the logistical support for the panel of judges, particularly transportation-related expenses necessary for their participation in the Division Science and Technology Fair.

13. The following documents are enclosed for information and guidance of all concerned:
    - Enclosure No. 1 DSTF 2026 Program Matrix, Division Scientific Review Committee (DSRC), and Technical Working Committee
    - Enclosure No. 2 General and Specific Contest Guidelines
    - Enclosure No. 3 Schematic Diagram on the Flow of STF Activities
    - Enclosure No. 4 Tuklas Research Paper Format
    - Enclosure No. 5 Innovation Expo Paper Format
    - Enclosure No. 6 Updated Checkpoints for SRC Review
    - Enclosure No. 7 Tuklas-Project SRC Review and Recommendation Report
    - Enclosure No. 8 Tuklas Project Evaluation Form
    - Enclosure No. 9 Format of Data and Report for Submission of SSTF
    - Enclosure No. 10 Color and number codes for the different contest categories
    - Enclosure No. 11 End of Activity Report Format for the Division/School Science and Technology Fair

14. Food, transportation, and other incidental expenses of teacher-coaches, contestants, and other official participants shall be charged against the **School Local Funds** subject to the usual accounting and auditing rules and regulations.

15. All Division entries shall be submitted in one (1) printed copy and one (1) soft copy through the designated Google Drive submission portal. Schools are strongly encouraged to submit the required reports and project documents within the prescribed schedule to ensure efficient screening, validation, and evaluation of entries.

16. All teaching and non-teaching participants and TWG on October 10, 2026, will be entitled to **Vacation Service Credit (VSC)** and/or **Compensatory Time-Off (CTO)**, whichever is applicable, as stipulated in the DO 53 s. 2023 titled *Updated Guidelines on Grant of Vacation Service Credits to Teachers* and CSC-DBM Joint Circular No. 2, s. 2004 titled *Non-Monetary Remuneration for Overtime Services Rendered.*

17. This division memorandum shall serve as the **travel authority** of all concerned supervisors, school heads, teacher-coaches, learner-researchers, panel of validators and judges, and TWG during the submission of cluster winners' entries on **September 14-17, 2026**, screening and validation of entries on **September 24, 2026**, and the conduct of the DSTF 2026 on **October 10, 2026**.

18. All members of the Technical Working Group Committee shall have an online meeting on **September 22, 2026**, via MS Teams. The meeting link will be shared a day before the conduct of the online meeting.

19. For concerns and inquiries, you may contact Ana Marie B. Castaneda EdD, Education Program Supervisor, Science at ana.castaneda003@deped.gov.ph.

20. Immediate and wide dissemination of this Memorandum is earnestly desired.

ROMEO M. ALIP PhD, CESO V
Schools Division Superintendent

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Enclosure No. 1 to Division Memorandum No. ____, s. 2026

DSTF 2026 Program Matrix and Technical Working Group

Time	Activity	Person/Group
7:00-8:00 AM	Registration	TWG
8:00-8:30 AM	Opening Program	TWG/Host School
8:30 AM- 12:00 PM	Contest Proper	TWG/Judges
12:00-1:00 PM	Lunch Break	TWG
1:00-3:00 PM	Continuation/Finalization	Participants, TWG, Judges
3:00-3:15 PM	Health Break	TWG/Host School
3:15-5:00 PM	Awarding Ceremony/ Closing Program	TWG/Host School

VALIDATION OF CLUSTER WINNERS FOR DSTF 2026
TECHNICAL WORKING GROUP
September 24, 2026

Name	Position	School
Registration of Entries for Validation		
Maria Winnie P. Dizon	Head Teacher III Overall Chairman	Porac Model Community High School
Program & Invitation, Soft Copies of DSTF Entries Robotics and Intelligent Machines Category		
Rose Jamaica M. Dela Rosa PhD	Chairman	San Roque Dau High School
Soft Copies of DSTF Entries, Life & Physical Science Categories		
Paulyn R. Espino	Head Teacher III Chairman	Potrero National High School
Soft Copies of DSTF Entries, Mathematics and Computational Science and Science Innovation Expo Categories		
Lea E. Hondrade	Head Teacher III Chairman	Pasig National High School

DSTF 2026 TECHNICAL WORKING GROUP
October 10, 2026

Name	Position	School
Maria Winnie P. Dizon	Head Teacher III Overall Chairman	Porac Model Community High School
Physical Arrangement		
Paulyn R. Espino	Head Teacher III Chairman	Potrero National High School
Mark P. Macatuno	Teacher II, Member	Potrero National High School
Honeybabes C. Godarido	Teacher I, Member	Potrero National High School
Jancen S. Tolentino	Teacher I, Member	Potrero National High School
Registration		
Reyna M. Dabu	Master Teacher III Chairman	San Vicente National High School
Donna Marie B. Bautista	Master Teacher I Member	Lubao National High School
Cristine M. Hernandez	Master Teacher III Member	San Pablo High School
Program & Invitation		
Charles Allen Gozum Canlas	Teacher II Chairman	Sta. Maria National High School
Aileen C. Manalo	Master Teacher III, Member	Potrero National High School
Raidis L. Dela Cruz	Master Teacher III, Member	Potrero National High School
Refreshment		
Maria Monica D. Dela Cruz	Master Teacher II Chairman	Diosdado Macapagal High School
Jaypril C. Tayag	Teacher VI Refreshment	Dela Paz Libutad High School
Debbie O. Lulu	Master Teacher I Refreshment	Sta. Ana National High School
Soft Copies of DSTF Entries Physical Science Category		
Leslie Anne N. Verdeflor	Teacher III Chairman- Physical Science	San Vicente National High School

Mary Grace E. Cruz	Teacher V Member- Physical Science	San Vicente National High School
Angela S. Pinlac	Teacher III Member- Physical Science	Lubao National High School
Soft Copies of DSTF Entries Life Science Category		
Reynaldo G. Bautista Jr.	Teacher II Chairman- Life Science	Mangga High School
Cynthia S. Ignacio	Teacher III Member- Life Science	Talang High School
Daisy L. Maun	Teacher VI Member- Life Science	San Juan San Luis National High School
Soft Copies of DSTF Entries Mathematics and Computational Science Category		
Lea E. Hondrade	Head Teacher III Chairman- Mathematics and Computational Science Category	Pasig National High School
Michael P. Buan	Teacher III Member- Mathematics and Computational Science Category	Pasig National High School
Razel M. Malvar	Teacher I Member- Mathematics and Computational Science Category	Pasig National High School
Soft Copies of DSTF Entries Robotics and Intelligent Machines Category		
Anjo D. Soliman	Teacher II Chairman- Robotics and Intelligent Machines Category	Pasig National High School
Janine B. Alarcon	Teacher II Member- Robotics and	Pasig National High School

	Intelligent Machines Category	
Lady Lee M. Mallari	Teacher I Member- Robotics and Intelligent Machines Category	Pasig National High School
Soft Copies of DSTF Entries Science Innovation Expo Category		
Joshua L. Pineda	Teacher III Chairman- Science Innovation Expo	Emigdio A. Bondoc Senior High School
Cathlyn M. Quiambao	Teacher II Member- Science Innovation Expo	Emigdio A. Bondoc Senior High School
Bea Kryshan P. Bondoc	Teacher I Member- Science Innovation Expo	Emigdio A. Bondoc Senior High School
Certificates and Awards		
Rose Jamaica M. Dela Rosa PhD	Chairman	San Roque Dau High School
Gener P. Magcalas	Teacher IV Member	Sto. Rosario High School
Dinah Norline D. Rodis	Teacher I Member	San Roque Dau High School
Photo Documentation and Narrative		
Jeanie J. Padilla	Master Teacher II Chairman	Justino Sevilla High School
Renz Christian B. Manalili	Teacher V Member	Justino Sevilla High School
Ana Theresa G. Reyes	Teacher VI Member	Justino Sevilla High School

Address: High School Blvd., Brgy. Lourdes, City of San Fernando (P)
Telephone No.: (045) 435-2728; (045) 435-7404
Email Address: pampanga@deped.gov.ph
Website: www.depedpampanga.ph

GENERAL AND SPECIFIC CONTEST GUIDELINES

GENERAL CONTEST GUIDELINES

1. All contestants should be at the contest venue 15 minutes before the contest starts and should register.
2. For the oral presentations, the contestants will be randomly assigned in no particular order.
3. Contestants should be in smart casual attire and must wear the assigned contest code ID.
4. Only authorized persons are allowed to stay at the venue during the contest proper.
5. Contestants are not allowed to use cellular/mobile phones and the like during the contest.
6. All qualified projects will be evaluated during the oral presentation. Student researcher/s is/are advised to submit a copy of the PowerPoint presentation to the assigned Technical Working Group (TWG) member per Breakout Session.
7. Proponent/s will be given 5 minutes to present their research project.
   1st bell - Start of the presentation
   2nd bell - Last two minutes
   3rd bell - End of the presentation
8. The board of judges will be given 10 minutes to ask questions to the proponent/s.
9. The decision of the Board of Judges is **final and unappealable**.

SPECIFIC CONTEST GUIDELINES

A. Science Innovation Expo

1. Science Innovation Expo is designed to showcase the products and innovations of learners in the form of **gadgets or tools.** It aims to crowd-source and display Science and Technology innovations and solutions to everyday challenges. Furthermore, it also aims to develop appropriate technologies by taking advantage of patent information to identify suitable solutions to technical problems.
2. The competition shall start at the school level advancing to the division, regional, and national levels.
3. This contest is open for both individual and team innovators consisting of a two to three (2-3) members only.
4. Only projects/innovations/inventions that are not yet patented or already in the initial process of patent application are allowed to join the competition.
5. Each school should send one (1) best invention by an individual and one (1) by a team.
6. Format of the Paper Invention Report in Encloure 9 shall be followed.
7. One (1) hard copy, with soft copy in USB Flash drive, of the paper invention report with endorsement from the school shall be submitted on or before **September 14-17, 2026**.
8. The paper report shall be in soft-bound packaging with a clear/transparent hard plastic cover on top and cardboard or half of the folder at the back cover. The title page should be on white bond paper. The hard copy shall have one (1) USB Flash drive of the soft copy of the report placed on the back cover.

9. The hard copy and USB Flash drive should be properly coded. The category code of the study shall also be written on the USB Flash drive. Refer to Enclosure 10 for the color and number codes for the different contest categories.
10. The format of the innovation expo display board in **Enclosure 7** shall be used.
11. The rank 1 best invention by an individual or by a team shall be the division 1 official entry to the Regional First Round of Evaluation.

B. Research Competitions

1. The competitions shall be conducted among Junior and Senior High School students from both public and private schools. **There is no separate contest for the Junior and Senior High Schools.**

2. Science research/investigatory projects should be new (not a repetition of years back projects) or a continuation of the previous year's project and conform with international rules published by the Intel International Rules for Pre-College Science Research: Guidelines for Science and Engineering Fairs (see https://www.societyforscience.org/isef/international-rules/). Each project should have one Research Adviser and an Institutional Review Board or a Scientific Review Committee.

3. The competition shall start at the school level advancing to the cluster, division, regional, national then to the international level. The participation of schools in the Science and Technology Fair shall be categorized into **five (5)** types, **Life Science, Physical Science, and Robotics and Intelligent Machines, and Mathematics and Computational Sciences, Science Innovation Expo.**

4. Team Projects in the five (5) categories, LS, PS, RIM, MCS, and SIE shall be composed of two (2) or three (3) researchers from **Grades 9 to 12**. **One (1) leader** and only **one (1) research adviser** shall be designated.

5. The research plan and scientific research paper must follow the format based on the ISEF Rules.

6. Only the **first-place winners** in the four (4) categories at the School level shall be officially endorsed by the School to the Division Office, **(see FORMAT OF DATA 1),** together with the one (1) copy of write-ups of their Investigatory Projects with 1 set of complete required forms and Research Plan (**see Checklist of Forms**) in 1 folder and 1 scanned copy of Research Logbook in another folder on or before **September 14-17, 2026,** for evaluation and screening to be done by the Division Scientific Review Committee (DSRC) on **September 25, 2026.**
7. **Projects** that are to be found **plagiarized** and with **incomplete required forms** during the screening and evaluation are **automatically disapproved.**

8. Manuscripts should be in soft-bound packaging with a clear/transparent hard plastic cover on top and cardboard or half of the folder at the back cover. The title page should be on white bond paper. One (1) set of complete required forms and scanned/photocopies of the project notebook should be placed separately in a folder

(please refer to the Scientific Review & Recommendation Report Form for the sequence/arrangement of the forms). *Covers of the manuscript, required forms, and scanned/photocopy of the project notebook shall be properly coded using the given color and number codes for different contest categories in Enclosure 1.* Sticker paper should be used in coding the manuscript. The font size of the code is 48 and the font is Bookman Old Style. This shall be placed on the upper right-hand corner of the transparent cover.

9. Only the proponents and research advisers of investigatory projects approved by the Division Scientific Review Committee are the official participants of the **Division Science Fair** on **October 10, 2026**.

10. The **ten (10) projects** that will be adjudged as **First Place** in the five (5) categories: Life Science – Individual & Team, Physical Science – Individual & Team and Robotics and Intelligent Machines - Individual and Team, and Mathematics and Computational Sciences-Individual and Team in the **Division Science and Technology Fair** shall be the division official entries to the **Regional Science and Technology Fair (RSTF)**

11. Only the **projects approved** by the **Division Scientific Review Committee** shall **participate** in the **DSTF 2026.**

12. The following are forms and manuscripts to be submitted in all levels of competition:
    A. **RESEARCH PLAN**
    B. **FORMS for all the projects**
        a. Checklist for Adult Sponsor
        b. Student Checklist (1A)
        c. Research Plan (NOTE: No need to attach the Research Plan Instructions)
        d. Approval Form (1B)
        e. Regulated Research Institutional/Industrial Setting Form (1C)
    C. **FORMS depending on the type of research (e.g involving humans, vertebrate animals, hazardous chemicals, etc.)**
        a. Qualified Scientist Form (2)
        b. Risk Assessment Form (3)
        c. Human Participants Form (4)
        d. Human Informed Consent Form
        e. Vertebrate Animal Form (5A)
        f. Vertebrate Animal Form (5B)
        g. Potentially Hazardous Biological Agents Risk Assessment Form (6A)
        h. Human and Vertebrae Animal Tissue Form (6B)
        i. Continuation Project Form (7)
    D. **Abstract (Maximum of 250 words)**
        The abstract should include the following:
        a. Purpose of the experiment
        b. Procedure
        c. Data conclusion

The abstract may NOT include the following:

a) Acknowledgement
b) Work of procedures done by the mentor

E. **Research Paper** (Include the Title Page, Abstract, Main Body, and References)
F. **Project Evaluation Form** (see Enclosure 15)
G. **Scanned copy of the log book in pdf format**

13. **Project** proponents **should have been screened by the Institutional Review Board (IRB)/Scientific Review Committee (SRC)** at the **school level**. All **school-level winners must be certified by the division SRC** to join in the **division-level fair**.

14. The **Division Science Supervisor** shall be a **member of the BOJs** who shall **determine** the **school/division winners** of the different categories and fair divisions.

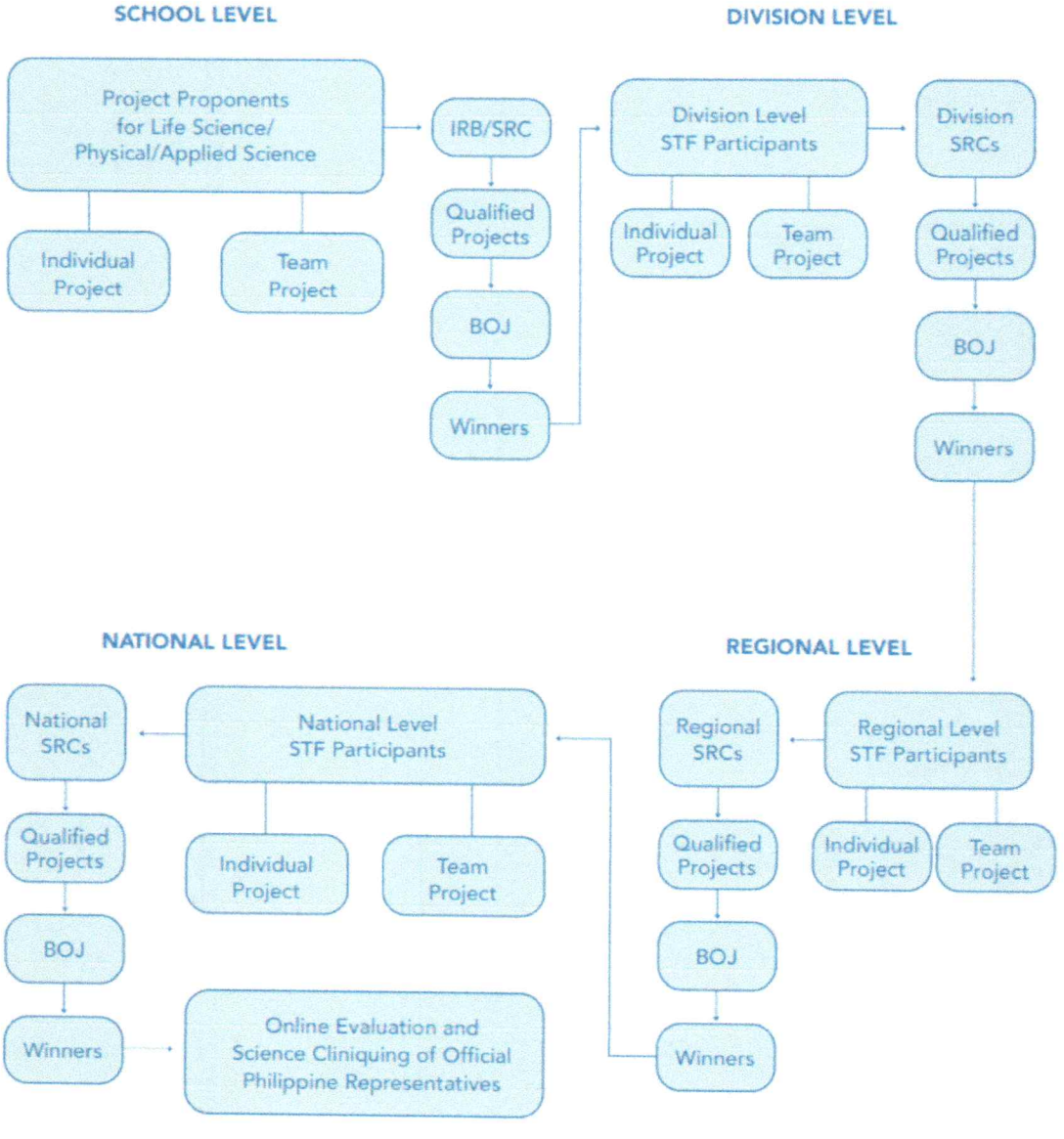
15. Winners at the school level shall be officially endorsed to the division office for the cluster and division level. Likewise, the division-level winners shall be officially endorsed to the regional office.

16. A thorough review of the research paper of the students starting from the school level (by the research adviser), and division level (by the division science fair coordinator) must be done before submitting it to the regional level to ensure the quality and completeness of the said paper.

REMINDER: All changes in the forms as stipulated in the approved handbook and in accordance with the ISEF Forms must be followed by all participants.

Enclosure No. 3 to Division Memorandum No. ____, s. 2026

SCHEMATIC DIAGRAM ON THE FLOW OF STF ACTIVITIES



Enclosure No. 4 to Division Memorandum No. ____, s. 2026

TUKLAS RESEARCH PAPER FORMAT

I. Research Plan: This is to be written before 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 investigatory paper): 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.*

A. ***Research Question or Problem being addressed***
B. ***Goals/Expected Outcomes/Hypotheses***
C. ***Procedures****: Detail all procedures and experimental designs to be used for data collection.*
D. ***Risk and Safety:*** *Identify any potential risks and safety precautions needed.*
E. ***Data Analysis:*** *Examine, organize, and interpret data to answer research questions, or either accept or reject hypotheses.*
F. ***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 Book:

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

III. Research Paper Format:

Science Project	Engineering Project	Mathematics and Computer Sciences Project
Introduction Methods Results Discussion Conclusions References	Introduction Methods Results Discussion Conclusions References	Introduction Framework Findings Conclusions References

Note: Check the details and description of the components of the research paper in the approved STF handbook.

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

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

Do not include acknowledgments in the abstract. This includes any references to mentors, instructional facilities,, and awards or patents received.

Contents of the Abstract Portion

Title of the Research

Finalist's Name (or names, if a team project)

School Name, City, and Region

Purpose

- *An introductory statement providing background, namely 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 detalis 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 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 conlusions you have drawn.*
- *Do not include necessary 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 Intel ISEF abstract.*
- *Unless significant, do not include any of the experimentl design difficulties encountered in the research.*
- The Intel ISEF abstract does not include a bibliography. ISEF requires the bibliography as part of the research plan tobe provided on Form 1A.

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.

SAMPLE ABSTRACTS

2018 ISEF Second Grand Award, Energy Physical	**2018 ISEF Third Grand Award, Earth and Environmental Science**
Solar-Tracking Adaptive Robot PV Panels	**Biosorption of Manganese Mine Effluents Using Crude Chitin from Shell Wastes of Philippine Bivalves**
By Cadores, Keith Russel; Rivera, Eugene; Manzanero, Joscel Kent Adviser: Johnny T. Samino *School Name, City and Region should also be included*	By Saquin, Elaine; Molejona, Randt Adviser: Ronilo Aponte *School Name, City and Region should also be included*
The leading sources of energy globally are oil, coal, and natural gas – fossil fuels that can be depleted, and whose access and use greatly impact the environment. Hence, much study has been made of renewable energy sources and use, including harnessing solar power through a photovoltaic cell. The study aimed to improve the power harvesting and generating capacity of photovoltaic cells by designing and building a solar device that mimics a flower opening when the sun is out,	The area aound Ajuy River in Iloilo, Philippines is currently being mined for manganese ore, and river water samples exceed the maximum manganese contaminant level set by the US-EPA. At the same time, the surplus of local bivalve waste is another environmental concern. Studies show that chemical treatment comprises water quality leaving toxic residues, and alternative treatment process is biosorption, or using the physical chemical properties of a

tracks the sun's movement, closes when the light source is no longer detected and responds to humidity and temperature to maximize power generation. Six (6) photovoltaic panels are mounted on a base operated by servo motors and controlled by Arduino module. Electronics, servo motors, Arduino, and humidity sensors were acquired commercially. Other materials included those repurposed from a broken umbrella and electric fan, and scrap acrylic sheets. The device's performance was compared to that of a fixed-mounted photovoltaic *panels* at different stages. The fixed setup generated 4.71W while the petal panels produced 6.95W, a 47.72% increase. Taxing the power consumption of the device to the power it generates gives an average of 6.09W. This translates to a 29.29% improvement from the 4.71W generated by the fixed panel setup. T-Test for Dependent Means was used and showed that there is a significant difference between the power generations of the two setups (p= 0.000261, a= 0.05) This robotic design amplifies capacity to harness solar power through a photovoltaic cell.	biomass to adsorb heavy metals in contaminated water. The study aims to extract crude chitin from shell wastes of *Bractechlamys vexillum, Perna viridis, and Placuna placenta* and determine its adsorption capacity on manganese in simulated and actual mine water. Crude chitin was obtained by pulverization, deproteinization, demineralization, and decolorization of shells. Biosorption by flocculation followed 5 g: 50 mL chitin-to-water ratio. Filtrates were analyzed using MP-AES after 24 hours. In both actual and simulated mine water respectively. *B. vexillum* yielded the highest adsorption percentage of 91.43% and 99.58%, comparable to *P. placenta* of 91.43% and 99.37%, while significantly different to *P. viridis* of -57.14% and 31.53%, ($p<0.05$). FT-IR validated that presence of chitin in shells based on carbonyl-containing functional groups at peaks 1530-1560 cm-1 and 1660-1680 cm-1. SEM micrographs showed the amorphous and non-homogenous structure of chitin. Thus, crude chitin from *B. vexillum* and *P. placenta* can be biosorbents for water treatment of manganese-impacted effluents and promote appropriate waste management of local bivalves.

REMINDER: All changes in the parts of the research paper as stipulated in the approved handbook must be followed by all participants.

Enclosure No. 5 to Division Memorandum No. ____, s. 2026

INNOVATION EXPO PAPER 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 describe in detail how you determined that the invention that you created did not already exist. 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 the problem in solving problems and issues of today and tomorrow.

Acknowledgments: You should always credit 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.

REMINDER: All changes in the parts of the innovation expo paper as stipulated in the approved handbook must be followed by all participants.

Enclosure No. 6 to Division Memorandum No. ____, s. 2026

UPDATED CHECKPOINTS FOR SRC REVIEW

This document was developed to provide guidance for Scientific Review Committee (SRC) to review a project after experimentation.

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	Student Researcher/s	Before experimentation	Required for all Projects
Form 1B – Approval Form	Student Researcher/s	Before experimentation	Required for all Projects
Research Plan/Project Summary	Student Researcher/s	Before experimentation	Required for all Projects
Form 1C – Regulated Research Institution/Industrial Setting Form	Adult supervising	After experimentation	Required if research 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 involving human participants, vertebrate animals, potentially hazardous biological agents, and hazardous chemicals (Drug Enforcement Administration (DEA)-controlled substances
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 (IRB)	Before experimentation	Required if research involves human participant

			**if in a regulated research institution, use institutional approval forms*
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 (SRC) 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, **with IACUC (International Animal Care & Use Committee) preapproval**
Form 6A – Potentially Hazardous Biological Agents Risk Assessment Form	Student Researcher Qualified Scientist/Designated Supervisor	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 Vertebrate Animal Tissue	Student Researcher Qualified Scientist/Designated Supervisor	Before experimentation	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
Form 7 – Continuation/Research Progression Project Form	Student Researcher	Before experimentation	Required for projects that are a continuation/progression in the same field of study as previous project.

PRE- APPROVAL

Human Participants: Does the study mention people, interviews, responses, answers, consent, etc. ***(requires Form 4).*** Exempt studies include prototype/invention testing, if only done by student researcher, public data review, some observational studies. All others require IRB preapproval.

Animals: Look for indications of type of study and research site. Strictly observational studies with no interaction are exempt. Tissue studies in which the student is given the tissue and did not interact with the animal do not need animal forms but will still need preapproval as a PHBA tissue study.

A. Projects may be conducted at home, school, or field ONLY IF the study involved agricultural, behavioral, observational, or supplemental nutrition AND was non-invasive AND had no negative effects on health and wellbeing ***(requires Form 5A).***

B. Projects must be conducted at research institution with ***IACUC preapproval*** in all other cases ***(requires Form 5B).***

PHBA's Study included microorganisms, rDNA, or fresh/frozen tissue, blood, body fluids. Used terms like culturing, plating, tissue, source of tissue, etc. Exemptions include non-primate established cell lines, yeast, lactobacillus, meat from a grocery store, and other items listed in the rules (all non-exempt PHBA's ***require Form 6A*** and ***IRB pre-approval; tissue studies require Form 6A, 6B, and IRB pre-approval)***

Was the study done at a **Regulated Research Institute/Industrial Setting** (RRI)? Is the terminology or equipment very sophisticated? Look for possible RRI. ***(Form 1C)***

Does this appear to be a **Continuation?** Any mention of previous research? Uses terms like previously, earlier research, improved, redesigned, year 3, etc. ***(Form 7)***

Any discussion of a **Partner** in a non-team study? Uses **"we"** consistently (math projects and international studies frequently use "we" for all studies). ***Form 1C*** answers this question for studies done at a university.

Any possibly **hazardous chemicals, activities, or devices**? Includes high voltage, hazardous equipment, radioactivity, firearms, explosives, prescription drugs, DEA-controlled substances, alcohol and tobacco. ***(Form 3)***

Timeline Project appears too long/too old: more than one year or started before January of last year. **(Form 1A** contains this information)

CHECKBOXES ON ABSTRACT

Checkbox 1. Project involved human participants, vertebrate animals, or PHBA"s. Requires preapproval and additional forms. Exempt studies do not check this box.

Checkbox 2. Abstract may only reflect their work not the mentor's. May require abstract rewrite.

Checkbox 3. Worked at RRI. **(Requires 1C)**

Checkbox 4. Project is a continuation. (**Requires Form 7**, **previous abstract** & **research plan**)

CHECKLIST FOR ADULT SPONSOR (1)
This form asks more specifically about projects that required preapproval (humans, animals, PHBA"s), continuations, RRI"s, and lists the forms that are required. The answers to this checklist need to be consistent with the answers on other forms.

This **page is signed** when the project is reviewed which should be **before** the **project starts**.

STUDENT CHECKLIST (1A)
Grade: Student must have been in high school at time of research in order to compete.

Contact information: If questions cannot be resolved from the paperwork, it is sometimes necessary to contact the student or adult sponsor.

Continuation: If a continuation must include ***Form 7***, previous abstracts, and last year's research plan. This information should match the checkmarks on the abstract and on ***Form 1***.

Start/End Dates: Project may only be one year in length and may not have started before January of the previous year. Student should have competed in the first fair which was held after the end date. Fair dates can be found in the Find-a-Fair search.

Information regarding Research Site: This will tell you if you need additional paperwork. For example, ***Form 1C for RRI, Form 5A*** if animals at school, field, home, ***Form 5B*** if animals at RRI, no culturing of microorganisms is allowed at home (FTQ), ***Form 6A*** for BSL-1 & BSL-2 studies which must be in the appropriate facilities.

RESEARCH PLAN/POST PROJECT SUMMARY

Review the research plan and post project summary to find information regarding each of the questions asked in previous section under Abstract. The Research Plan and Post Project Summary Instructions page lists the items that should be included. This needs to be very detailed and must be consistent with the documentation found on all other forms. If more information is needed about the study, the student or adult sponsor may need to be contacted (email, phone or interview).

Human Participants:

Look for information about subjects (any risk groups), recruitment, methods, risks & benefits, protection of privacy (HIPPA & FRPA), and informed consent (participant knows what they are being asked to do, that they may withdraw at any time, there is no coercion, etc.). Must have preapproval and often will require written consents. ***(Requires Form 4)***

Is the level of risk appropriate? What risk assessment was done? Should the study have written Consent/Permission/Assent? Is the survey attached?

Animals:

Pay particular attention to the detailed procedures and care of the animals in the research and if they looked for alternatives to animal research. ***(Requires 5A or 5B and SRC or IACUC pre-approval)***

Look for any potential FTQ items such as a study conducted at home, school of field that should have been done at an RRI, no indication of preapproval, any animal deaths due to experimental procedures, weight loss ≥15% in any group or subgroup, toxicity studies, studies designed to kill, studies which cause more than momentary pain or suffering, predator/prey, inappropriate water or food restriction, euthanasia by student, etc. Ensure that an allowable embryonic study didn't hatch and become a vertebrate study that is not permitted.

PHBA's: **(Potentially Hazardous Biological Agents)**

The source, quantity, and Biosafety Level (BSL) must be indicated for all microorganisms including established cell lines. All non-exempt microorganisms, cell lines, and tissues require ***SRC pre-approval, Form 6A and sometimes Form 6B.***

Culturing of microorganisms may NOT be conducted at home. (FTQ) All BSL-1 studies must be conducted at a BSL-1 facility or higher. If a petri dish or culture container with unknown or BSL-2 microorganisms is opened, it becomes a BSL-2 study and may only be conducted at a BSL-2 facility. (FTQ if opened, subcultured, etc. in BSL-1 lab.) Most high school laboratories are BSL-1 facilities, but it is possible that a high school could meet the more stringent requirements of a BSL-2 lab. BSL-3 or -4 studies, culturing CRE (Carbapenem Resistant *Enterobacteriacae*), and studies designed to engineer bacteria with multiple antibiotic resistance are not permitted.

Procedures to minimize risk must be clearly indicated. rDNA studies require close review to ensure proper oversight. Proper disposal methods must be listed (autoclaving, 10% bleach solution/sodium hypochlorite, biosafety pick up, etc.).

Hazardous Chemicals, Activities, or Devices:
Look for detailed descriptions of risks and safety precautions and procedures used, including the methods of disposal.

APPROVAL FORM (1B)
Dates: Signatures from student and parent should be before the start date shown on **1A.**
Preapproval #2a: Must be signed by SRC or IRB before experimentation begins (***Start date on 1A***) for human, animal, and PHBA studies but possible FTQ if no preapproval is documented.

Post approval #2b: SRC signs after experimentation ends ***(End date on 1A)*** if the study was conducted at a RRI. Institutional approval forms must also be submitted. (Possible FTQ)

Note: Some fairs will have the fair SRC pre-review a study before it is done at an institution, even if it is approved before experimentation by the institution, and then will also post-approve after the study is complete. They will therefore sign both boxes. Usually, however, it is either pre- or post-approval, not both.

Final SRC Approval: This is signed after the project is complete **(*End date Form 1A*)** and immediately before competition.

REGULATED RESEARCH INSTITUTION FORM (1C)
The information provided by the scientist on this form must be consistent with what the student answered on other forms. It must not be filled out by the student. This form is posted so the judges can easily see exactly what the student did rather than what the mentor or others in the research group did. All information must be on the form not "see attached." This form may only be from a university, college, or industrial site and may not be from their high school.

Checkboxes a) and b) help determine who did what and where.

Questions:
1. "Have you reviewed the rules" helps determine the amount of oversight and if an error was made in following the rules, if this an adult problem or a student problem or both.

2. "Is this a subset of your work" helps differentiate student research from mentor research.

3. "How did student get idea" helps determine originally by student.

4. "Was student part of a research group" indicates whether student worked with another high school student, which is only allowed for team projects not individual, or was part of a larger team of adult researchers, undergraduate or graduate students, which is allowed. Students are judged only on their own work, so it needs to be clear what part of the study was done by the entire group or the mentor and what was the student's work.

5-6. "What procedures" and "how independent" again help indicate what was actually done by the student.

Continuation: Frequently, the mentor will say "the student worked with me last year" or "in his previous research" or list dates of research which will indicate that the study must be treated as a continuation with ***Form 7***, etc. It also could indicate that the study is too old, too long, or that the student is presenting multiple years of research.

This form is signed by the mentor AFTER the study is completed ***(End date on 1A).***

QUALIFIED SCIENTIST FORM (2)

Look for answers that are consistent with the information on other forms. For example, if the scientist marks yes to "used humans" but other human subject forms aren't present, will need to clarify. Any yes responses on #2 will require documentation on additional forms.

This form documents the amount of oversight that the student had and the safety precautions needed. The QS and DS review the study before the experiment begins. All **approval signatures must be before research begins** (**Start date on 1A**).

Even when not required, this form may be submitted to show the oversight of the study.

RISK ASSESSMENT FORM (3)

Documents that both the student and the supervisor have assessed the risks involved in the research and describes what safety precautions and procedures are needed including the disposal procedures. **This form is completed before experimentation (Start date on 1A).**

This risk assessment is required for hazardous chemicals, activities, or devices, and for some PHBA's including protists, composting, coliform water test kits, decomposition of vertebrate organisms, etc.

Even when not required, this form may be submitted to show the oversight of the study.

HUMAN SUBJECTS FORM (4)

Make sure **Form 4** is complete including decision checkmarks in the box and all 3 signatures. (If project is approved with expedited review, only one signature is required). Missing checkmarks or signatures indicates no documentation of prior review and therefore could Fail to Qualify. All approval dates must be before research begins. **(Start date on 1A**). The IRB should not include the adult sponsor, designated supervisor, qualified scientist or a relative (e.g. parent) of the student because of conflict of interest.

Research Plan: Refer to the research plan for subject information: any risk groups, recruitment, methods, risks and benefits, protection of privacy (HIPPA & FRPA), and

informed consent (participant knows what they are being asked to do, that they may withdraw, no coercion, etc.).

Risk Level: Is the level of risk marked appropriate? Was a risk assessment done? Should the study have written Consent/Permission/Assent? Is the survey attached?

HUMAN INFORMED CONSENT FORM

Does the form clearly explain what the participant is being asked to do, how long it will take, the potential risks and steps that will be taken to mitigate risk, the benefits to the participant or to society, how confidentiality will be maintained, that it is completely voluntary and that they may withdraw at any time.

Adult participants sign giving their consent, minors give their assent, and parents of participants give permission. All **approval signatures must be before research begins (Start date on 1A).**

VERTEBRATE ANIMAL FORM (5A)

Since these animals are not in a research institution, which would provide a high level of oversight, special attention must be paid to the housing and husbandry that will be provided by the student. The final disposition of the animals must also be appropriate. Any death, illness, or unexpected weight loss must have been investigated and documented by an attached letter from the QS, DS, or a veterinarian. **If there were any deaths due to the experimental procedure, the project will Fail to Qualify**.

All **approval signatures must be before research begins (Start date on 1A)**. Capture & Release approvals must be attached when applicable.

VERTEBRATE ANIMAL FORM (5B)

Research which causes more than momentary pain or suffering is prohibited. Appropriate use of anesthetics, analgesics and/or tranquilizers must be documented. Any death, illness, or unexpected weight loss must have been investigated and documented by an attached letter from the QS, DS, or a veterinarian.

Euthanasia by student researchers is **prohibited** so the final disposition of the animals should also be indicated. **If there were any deaths due to the experimental procedure, the project will Fail to Qualify**.

If tissues were collected, how were they obtained and how will they be used.

The **IACUC approval forms must be attached**. They must clearly cover this study and must indicate that the study was approved before the start of the student research. Not all IACUC approval documentation will list the student individually, but the student research training must be indicated on the Form 5B. A letter from the QS or Principal Investigator indicating that the study had IACUC approval is not sufficient.

PHBA FORM (6A)

Identification, Including Biosafety Level (BSL): The source, quantity, and BSL must be indicated. A plant or non-primate established cell line will not require Form 6A but the student may fill out this form in order to document that it is from ATCC, etc. However, **human and other primate established cell lines and tissue cultures require *Form 6A.***

Prohibited Studies: BSL-3 or -4 studies, culturing CRE (Carbapenem Resistant *Enterobacteriacae*), and studies which are designed to engineer bacteria with multiple antibiotic resistance are not permitted. (FTQ)

Site: Microorganisms may NOT be cultured at home. (FTQ) All BSL-1 studies must be conducted at a BSL-1 facility or higher. If a culturing plate with unknown microorganisms is opened, except for disinfection or disposal, it becomes a BSL-2 study and may only be conducted at a BSL-2 facility. FTQ if opened, subcultured, etc. in BSL-1 lab. Most high schools are BSL-1 facilities, but it is possible that a high school could meet the more stringent requirements of a BSL-2 lab (see BSL-2 checklist).

Risk Reduction Procedures to minimize risk must be clearly indicated. rDNA studies require close review to ensure proper oversight.

Disposal Proper disposal methods must be listed: autoclaving, bleach solution, biosafety pick up, etc.

Approval Dates All approval signatures must be before research begins (***start date on 1A.)***

HUMAN AND VERTEBRATE ANIMAL TISSUE FORM (6B)

Students may conduct tissue studies with tissue they are given from an IACUC approved study within a research institution, but the animal may not be euthanized solely for the student's tissue study. The first checkbox in the signature box indicates this.

The second checkbox in the signature box is marked to indicate that the substances were handled in accordance with the safety standards for Blood Borne Pathogens.

All approval signatures must be before research begins (***start date on 1A***).

CONTINUATION FORM (7) Previous Year's Abstract & Research Plan

This form is posted with the project so that the judges can tell at a glance exactly what was new and different about this year's study. All information must be on the form, not "see attached." Because research projects may only be 1 year's work, they will be judged on the current work only not on previous work, and this form is used to document current versus previous research.

Frequently, students don't wish to call their project a continuation, but it's good research to continue a line of investigation even when the focus is now totally different. If the study is in the same field, if anything they learned in a previous year helped with the current

study, or if the current study refers to any earlier research, then it is a continuation and ***Form 7,*** and ***previous abstract*** and research plan are required.

Repetition of a previous study that reflects no changes but simply retests or increases sample size is not permitted.

A longitudinal study, in which time is a critical variable, is permitted but the original data from previous years cannot be presented only the comparison between years.

REMINDER: All changes in the forms as stipulated in the approved handbook and ISEF Forms must be followed by all participants. Kindly check this link: https://tinyurl.com/2025-ISEF-FORMS.

Enclosure No. 7 to Division Memorandum No. ____, s. 2026

TUKLAS-SRC REVIEW AND RECOMMENDATION REPORT

Project Title:

_____

_____

Fair Division: [ ] Life [ ] Physical/Applied [ ] Robotics & Intelligent Machines [ ] Mathematics and Computational Science

Category: [ ] Individual [ ] Team

Instruction: Please put a check [/] in the appropriate column and if necessary, write recommendations in 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 accomplished 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 brief synopsis of background 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 GOAL(S), EXPECTED OUTCOMES. Is this based on RATIONALE?			
C. RESEARCH METHODS AND CONCLUSIONS			
a. Procedures i. Does it show all procedures and experimental designs, including methods for data collection? ii. There should be NO inclusion of work of mentor or others.			

iii. Parameters should NOT be too strict to allow possible changes.			
b. Risk and Safety Does it identify all potential risks and safety precautions needed?			
c. Data Analysis i. Does it describe all procedures for data analysis? ii. Parameters should NOT be too strict to allow possible changes			
D. BIBLIOGRAPHY Does it have at least 5 major references? If using vertebrate animals, include 1 reference on animal care (American Psychological Association)			
Note: Items 3.E-H are needed ONLY for researches on HUMAN PARTICIPANTS, VERTEBRATE ANIMALS, POTENTIALLY HAZARDOUS BIOLOGICAL AGENTS (see attached Research Plan/Project Summary Instructions)			
E. HUMAN PARTICIPANTS RESEARCH Does it provide the following? a. Description b. Recruitment c. Methods d. Risk Assessment e. Protection of Privacy f. Informed Consent Process			
F. VERTEBRATE ANIMAL RESEARCH Does it provide for the following? a. Potential ALTERNATIVES to vertebrate animal used b. Potential Impact or contribution of research c. Detailed procedures d. Detail on animal numbers, strain, sex, age, source, etc. e. Describe housing and oversight of daily care f. Disposition of animals at study termination			
G. POTENTIALLY HAZARDOUS BIOLOGICAL AGENT RESEARCH Does it provide for the following? a. Biosafety Level (BSL) Assessment & determination			

b. Source of agent, specific cell line c. Safety precautions d. Methods of disposal			
H. HAZARDOUS CHEMICALS, ACTIVITIES & DEVICES Does it provide for the following? a. Risk Assessment process & results b. Chemical concentrations and drug dosages c. Safety precautions and procedures to minimize risks d. Methods of disposal			
4. Approval Form 1B (for ALL students)			
5. Abstract			

VERY IMPORTANT 2: See Part II, Risk Assessment (3) for

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

PART 2: ADDITIONAL REQUIRED FORMS	**Complete**	**Incomplete**	**Recommendations**
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. **Is it properly accomplished and signed by the DESIGNATED SUPERVISING ADULT?**			
7. Qualified Scientist Form (2) For researches with human participants, vertebrate animals, potentially hazardous biological agents, DEA-controlled substances; completed and signed **BEFORE** start of experimentation. **Is it properly accomplished and signed by QUALIFIED SCIENTIST?**			
8. Risk Assessment Form (3)			

For researches using hazardous chemicals, activities or devices and microorganisms exempt from pre-approval. Must be completed **BEFORE** Experimentation. **Is It properly accomplished and signed by DESIGNATED SUPERVISING ADULT OR QUALIFIED SCIENTIST (when applicable)**			
9. Human Participants Form (4) For researches involving human participants not at a Regulated Research Institution. **Did the DESIGNATED ADULT SUPERVISOR/ INSTITUTION approve the research BEFORE experimentation?**			
10. Vertebrate Animal Form (5A) For researches involving vertebrate animals that is conducted in a school/home/field research site **A. Is it properly accomplished, approved and signed by SRC BEFORE experimentation?** **B. Is it properly accomplished, approved and signed by DESIGNATED VETERINARIAN BEFORE experimentation?** **C. Is it properly accomplished, approved and signed by DESIGNATED SUPERVISOR OR QUALIFIED SCIENTIST (as applicable) BEFORE experimentation?**			
11. Vertebrate Animal Form (5B) For researches involving vertebrate animals that is conducted at a Regulated Research Institution **A. Does it have *Institutional Animal Care and Use Committee (IACUC)* approval BEFORE experimentation?** **B. Is it properly accomplished, approved and signed by a QUALIFIED SCIENTIST/PRINCIPAL INVESTIGATOR?**			
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. **A. Does it have SRC/IACUC/Institutional Biosafety Committee (IBC) approval BEFORE experimentation?** **B. Is it properly accomplished, approved and signed by a QUALIFIED or DESIGNATED SUPERVISOR BEFORE experimentation?** **C. Is it properly accomplished, approved and signed by the SRC BEFORE experimentation?**			
13. Human Vertebrate Animal Tissue Form (6B) For researches 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 research involves living organisms, ensure that 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?**			
14. Continuation/Research Progression Projects Form (7) For researches that are a continuation/progression in the same field of study as a previous research. **A. This form MUST be accompanied by the PREVIOUS YEAR'S ABSTRACT AND RESEARCH PLAN.** **B. Is it properly accomplished, approved and signed by the student/s?**			
PART 3: RESEARCH PAPER (See attached IMRAD Format)			
1. COVER PAGE			

A. Is the research title present? B. Is/are the name/s of the student proponent's present? C. Is/Are the appropriate persons credited? **(The Research adviser and Research Consultants, if applicable MUST be present)**			
2. INTRODUCTION 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 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 or 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. Is there in (APA format) possible Researcher Notes, the research paper's Work Cited and possible appendices?			
PART 4: RESEARCH ABSTRACT (MAX. 250 WORDS)	Complete	Incomplete	Recommendations
1. Does it clearly and concisely state the **PURPOSE of 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?**			
VERY IMPORTANT: There should be NONE of the following: **a.** Acknowledgements of the research institutions and/or mentors with which the students were working **b.** Self-promotions and external endorsements **c.** Inclusion of work or procedures done by the mentor			
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 the Student Checklist (1A)?			
3. Does the END DATE in the logbook match the END DATE in the Student Checklist (1A)?			
4. Are all entries in the logbook properly dated?			
5. Does the logbook show accurate and detailed notes and findings throughout the course of the research? Does it include the data tables, and the like?			
6. Does the logbook show an 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:

REMINDER: All changes in the Review and Recommendation Report Template s stipulated in the approved handbook should be followed.

Enclosure No. 8 to Division Memorandum No. ____, s. 2025

Enclosure No. 10 to Division Memorandum No. ____, s. 2025

TUKLAS-PROJECT EVALUATION FORM

Title of Research Project: _____
Project Proponent/s:_____
School:_____
Fair Division: ( ) Life Science ( ) Physical Science ( ) Robotics & Intelligent Machines ( ) Mathematics and Computational Science
Category: ( ) Team ( ) Individual

Category	Score
1. Creative Ability (30) 1. Does the project show creative ability and originality in the: a. questions asked? b. approach to solving the problem? c. analysis of the data? d. interpretation of the data? e. use of equipment? f. construction or design of new equipment? 2. Creative research should support an investigation and help answer a question in an original way. 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.	
2. a. Scientific Thought (30) (If an engineering project, please see 2b. Engineering Goals.) 1. Is the problem stated clearly and unambiguously? 2. Was the problem sufficiently limited to allow plausible attack? Good scientists can identify important problems capable of solutions. 3. Was there a procedural plan for obtaining a solution? 4. Are the variables clearly recognized and defined? 5. If controls were necessary, did the student recognize their need and were they used correctly? 6. Are there adequate data to support the conclusions? 7. Does the finalist/team recognize the data's limitations? 8. Does the finalist/team understand the project's ties to related research?	

9. Does the finalist/team have an idea of what further research is warranted? 10. Did the finalist/team cite scientific literature, or only popular literature, or only popular literature (e.g. local newspapers, magazines)? **b. Engineering Goals** 1. Does the project have a clear objective? 2. Is the objective relevant to the potential user's needs? 3. Is the solution: workable? Acceptable to the potential user? Economically feasible? 4. Could the solution be utilized successfully in design or construction of an end product? 5. Is the solution a significant improvement over previous alternative or application? 6. Has the solution been tested for performances under the conditions of use?	
3. Thoroughness (15) 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 & dates)* of the experiment recorded in the research data logbook?	
4. Skill (15) 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) Did the student or team receive assistance from parents, teachers, scientists or engineers? 3. Was the project completed under adult supervision, or did the student/team work largely alone? 4. Where did the equipment come from? Was it built independently by the finalist or team? Was it obtained on loan? Was it part of a laboratory where the finalist/team worked?	
5. Clarity (10) 1. How clearly does the finalist or team discuss his/her/their project and explain the purpose, procedure, and conclusions? Watch out of 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? 8. Did the finalist/team perform all the project work, or did someone help?	
TOTAL	
Signature over printed name of the evaluator	

REMINDER: All changes in the Review and Recommendation Report Template as stipulated in the approved handbook should be followed.

Enclosure No. 9 to Division Memorandum No. ____, s. 2026

FORMAT OF DATA AND REPORT FOR SUBMISSION AFTER SCHOOL SCIENCE AND TECHNOLOGY FAIR

FORMAT OF DATA 1 (For the List of All Schools Participated in the Division Level)
(to be used in the official endorsement of the school to division and division to region

School:
Division Fair: x Life Science o Physical Science o Robotics and

No.	First Name	Middle Name	Last Name	Grade Level	School Name	Gender	Team/ Individual	Team Code	Research Adviser

Data	Total	Data	
Total No. of Female		Total No. of Robotics and Intelligent Machines Project Entries	
Total No. of Male		Total No. of Mathematics and Computer Sciences Project Entries	
Total No. of Participating Schools		Total No. of Grade 7 Student Participants	
Total No. of Participating Private Schools		Total No. of Grade 8 Student Participants	
Total No. of Participating SP STEM Schools		Total No. of Grade 9 Student Participants	
Total No. of Participating SP STEM Male Student		Total No. of Grade 10 Student Participants	
Total No. of Participating SP STEM Female Student		Total No. of Grade 11 Student Participants	
Total No. of Individual Project Entries		Total No. of Grade 12 Student Participants	
Total No. of Team Project Entries		Total No. of Mathematics and Computer Sciences Project Entries	
Total No. of Life Sciences Project Entries		Total No. of Participating Teachers	
Total No. of Physical Sciences Project Entries			

Prepared by_____
Mobile No._____
School/Office Address and Phone No.: _____
School Coordinator_____**(if school level)**
Division Coordinator (Division Science EPS: _____ **(If division level)**

Note 1:

1. **Team code number** is used to indicate the number of teams that joined the Division STF and the members of each team.
2. Include all the schools that participated in the Division STF.
3. Insert an *asterisk (*)* before the first name of students who are qualified to join the Regional STF.
4. Insert an *asterisk* (*) before the school name whose student-proponents are in the Special Science Classes of S & T Oriented High Schools or Science, Technology, and Engineering (STE) Program.

NOTE 2:

- ✓ *School Science Fair Coordinators are required to submit the complete **list of the Investigatory Projects participated in the School Level Science Fair** following **the FORMAT OF DATA 1** to their respective Division Science Fair Coordinator.*
- ✓ *Division Science Fair Coordinators are also required to submit:*
  1. *a **complete list of all Investigatory Projects** submitted by all School Science Fair Coordinators using **FORMAT OF DATA 1**; and*
  2. *the list of the **eight (8) First Place winners** in the four categories: LS-Individual & Team, PS-Individual & Team, RIM- Individual & Team, and MCS-Individual & Team; and the **top 1 best innovation (tools or gadgets) by an individual and by a team** in the Science Innovation Expo following the **FORMAT OF DATA 2** (for the First Place winners) to the Regional Science Fair Coordinator. In addition, all Division Science Fair Coordinators should submit **accomplishment reports** on their 2024 Division Science and Technology Fair. (Please see and **follow** the **prescribed contents** of the report).*

FORMAT OF DATA 2 (for the First Place Winners)
(to be used in the official endorsement of the school to division & division to region)

This should be in **Excel spreadsheet** and sent to email address: joseph.reyes16@deped.gov.ph & hard copy be submitted to the Regional Office together with the 8 copies of the write-ups of 1st place winner investigatory projects and 2 entries to the Science Innovation Expo.

School: (if school level)_____
Division: (if division level) _____

CATEGORY	First Name	Middle Name	Last Name	Grade Level	Age	Gender	Project Title	Name of School & Address/ Phone Number	Name of Project Adviser/Phone No.
Research Competitions									
Life Science **Individual** 1st Place									
Life Science **Team** 1st Place									
Physical Science **Individual**									

1st Place									
Physical Science **Team** 1st Place									
Robotics and Intelligent Machines **Individual** 1st Place									
Robotics and Intelligent Machines **Team** 1st Place									
Mathematics and Computational Science **Individual** 1st Place									
Mathematics and Computational Science **Team** 1st Place									
Science Innovation Expo (Top 1 Best Invention)									
Individual									
Team									

Prepared by:

_____
School Science Fair Coordinator (If school level)
Division Science Fair Coordinator (If division level)

Noted:

_____
School Principal (If school level)
Schools Division Superintendent (If division level)

REMINDER: All changes in the Template as stipulated in the approved handbook should be followed.

Enclosure No. 10 of Division Memorandum No. ____, s. 2026

COLOR AND LETTER-NUMBER CODES FOR THE DIFFERENT CONTEST CATEGORIES

(for coding of hard copies and USBs of the soft copies of the manuscripts/paper reports for the different contest categories)

School Code Code	CONTEST CATEGORY CODE & COLOR OF THE SIDE AND BACK COVER					
	Life Science (LS)		Physical Science (PS)		Robotics & Intelligent Machines (RIM)	
	Individual Green	Team Yellow	Individual Blue	Team Orange	Individual Pink	Team Brown
STE High Schools 01	LS-I-SDO14-01	LS-T-SDO14-01	PS-I-SDO14-01	PS-T-SDO14-01	RIM-I-SDO14-01	RIM-T-SDO14-01
Regular High School-Public-02	LS-I-SDO14-02	LS-T-SDO14-02	PS-I-SDO14-02	PS-T-SDO14-02	RIM-I-SDO14-02	RIM-T-SDO14-02
Secondary Schools-Private-03	LS-I-SDO14-03	LS-T-SDO14-03	PS-I-SDO14-03	PS-T-SDO14-03	RIM-I-SDO14-03	RIM-T-SDO14-03

School Code	CONTEST CATEGORY CODE & COLOR OF THE SIDE AND BACK COVER			
	Mathematics and Computational Science (MCS)		Science Innovation Expo (SIE)	
	Individual Red	Team Purple	Individual Light Blue	Team Dark Blue
STE High Schools 01	MCS-I-SDO14-01	MCS-T-SDO14-01	SIE-I-SDO14-01	SIE-T-SDO14-01
Regular Public Secondary Schools-02	MCS-I-SDO14-02	MCS-T-SDO14-02	SIE-I-SDO14-02	SIE-T-SDO14-02
Private Secondary Schools- -03	MCS-I-SDO14-03	MCS-T-SDO14-03	SIE-I-SDO14-03	SIE-T-SDO14-03

Enclosure No. 11 of Division Memorandum No. ____, s. 2026

END OF ACTIVITY REPORT FORMAT FOR THE DIVISION/SCHOOL SCIENCE AND TECHNOLOGY FAIR

The Report of the Conduct S&T Fair may include the following:

1. *Title*
2. *Table of Contents*
3. *Introduction/ Rationale*
4. *Detailed Information*
   - *General information*
   - *SRC Deliberation (including the results, findings and recommendations)*
   - *Program of activities (Day to day activities)*
   - *List of Entries (include the 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*

***Paper size**: A4; **color of the cover**: violet; **binding**: soft-bound*

The profile of the research adviser should include the name, subjects being taught, and area of specialization. *(The inclusion of this part was forgotten by some EPSs in the previously submitted reports.)***

REMINDER: All changes in the Template as stipulated in the approved handbook should be followed.