



Republic of the Philippines  
**Department of Education**  
 REGION X – NORTHERN MINDANAO  
**SCHOOLS DIVISION OF EL SALVADOR CITY**

**Office of the Schools Division Superintendent**

9 October 2024

DIVISION MEMORANDUM

No. 396, s. 2024

**Division Science and Technology Fair (DSTF) 2024**

To: Assistant Schools Division Superintendent  
 Chief, Education Supervisors  
 Education Program Supervisors  
 Elementary School Heads  
 Secondary School Heads  
 Teachers  
 All Others Concerned

1. The Division of El Salvador City through the Curriculum Implementation Division will conduct the **Division Science and Technology Fair (DSTF) 2024** on October 29 and 30, 2024, at Cogon National High School, Cogon, El Salvador City.
2. The DSTF aims to develop learners' critical thinking and problem-solving skills and creativity through scientific research.
3. This year's DSTF will hold the following competitions:

<b>Maximum Number of Learner Participants per School</b>	
<b>Life Science Category (4)</b>	
Individual	1
Team	maximum of 3
<b>Physical Science Category (4)</b>	
Individual	1
Team	maximum of 3
<b>Mathematics and Computational Science Category (4)</b>	
Individual	1
Team	maximum of 3
<b>Robotics and Intelligent Machines Category (4)</b>	
Individual	1
Team	maximum of 3
<b>Science Innovation Expo (4)</b>	
Individual	1
Team	maximum of 3
<b>TOTAL</b>	<b>20</b>





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3. Abstracts must be submitted via online to [mariejade.cacayan@deped.gov.ph](mailto:mariejade.cacayan@deped.gov.ph) with a subject format: DSTF\_SCHOOL\_CATEGORY (ex. DSTF\_MOLUGANNHS\_LS-I) deadline of submission on or before October 23, 2024.
4. This Memorandum shall serve as **Travel Authority**.
5. Attached are the guidelines for Division Science and Technology Fair 2024.
5. Travel and other incidental expenses shall be charged to school MOOE/local funds, subject to the usual accounting and auditing rules and procedures.
6. Participation shall be subject to the *no-disruption-of-classes policy* stipulated in DepEd Order No. 09, s. 2005 entitled *Instituting Measures to Increase Engaged Time-On-Task and Ensuring Compliance Therewith*. The concerned school head is advised to assign teachers to handle the classes of the identified teacher-participant.
7. This Office shall adhere to Equal Opportunity Principle (EOP) in the steps undertaken for this purpose. Hence, all decisions and actions shall be based on guidelines set forth, with no discrimination on the account of age, gender, identity, sexual orientation, civil status, disability, religion, ethnicity or political affiliation.
8. This Office directs the immediate and wide dissemination of this Memorandum.

**RANDOLPH B. TORTOLA**  
Schools Division Superintendent

Attch: As Stated

To be indicated under the Perpetual Index

DSTF

CID/ mjac



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**Guidelines on the Division Science and Technology Fair 2024 – 2025**

1. The competition is open to Grades 9-12 learners of both public and private high schools who may not reach the age of 20 on or before May 1 of the current school year.
2. Learners may work individually or in team, 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. 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 school year 2023 – 2024 with 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).
3. The first-place winners in each category at the Division Level shall represent the division to the Regional STF competition.
4. The participation of schools shall be clustered into five categories: Life Science, Physical Science, Mathematics and Computational Science, Robotics and Intelligent Machines and Science Innovation Expo.

Maximum Number of Learner Participants per School	
<b>Life Science Category (4)</b>	
Individual	1
Team	maximum of 3
<b>Physical Science Category (4)</b>	
Individual	1
Team	maximum of 3
<b>Mathematics and Computational Science Category (4)</b>	
Individual	1
Team	maximum of 3
<b>Robotics and Intelligent Machines Category (4)</b>	
Individual	1
Team	maximum of 3
<b>Science Innovation Expo (4)</b>	
Individual	1
Team	maximum of 3
<b>TOTAL</b>	<b>20</b>





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5. The following are the forms and manuscripts to be submitted in ALL levels of the competition:
- a. Research Plan
  - b. FORMS for all projects
    - i. Student Checklist (1A)
    - ii. Research Plan
    - iii. Approval Form (1B)
    - iv. Regulated Research Institutional/ Industrial Setting Form (1C)
    - v. Checklist for Adult Sponsor
  - c. Project Data Logbook
  - d. Research Paper Format
    - i. Introduction
    - ii. Methods
    - iii. Results
    - iv. Discussions
    - v. Conclusions
    - vi. References
  - e. Abstract (Maximum of 250 words)  
The abstract should include the following:
    - i. Title
    - ii. Purpose
    - iii. Procedure
    - iv. Observations/Data/Results
    - v. Conclusion
  - f. Project Evaluation Form





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**Physical Project Board Dimension:**

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

----- 1 meter -----

PROJECT TITLE	
ABSTRACT	
BACKGROUND	RESULTS AND DISCUSSION
OBJECTIVES	CONCLUSION
SIGNIFICANCE	RECOMMENDATION
METHODOLOGY	BIBLIOGRAPHY
	PHOTO CREDITS

----- 2.5 meters -----



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**APPENDIX 5:**  
 Innovation Expo Paper Format

**APPENDIX 6:**  
 Innovation Expo Display Board 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 the innovation in solving problems and issues of today and tomorrow.

**Acknowledgements:** 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.

<b>Title</b>	Create a clear and attention-grabbing title that accurately reflects your innovation.
<b>Introduction</b>	Provide a brief introduction to your innovation, highlighting its purpose and significance.
<b>Problem Statement</b>	Clearly state the problem or challenge that your innovation addresses.
<b>Solution/Innovation</b>	Describe your innovative solution concisely and prominently on the poster.
<b>Features and Specifications</b>	Present the key features and specifications of your innovation using bullet points or visuals.
<b>Materials and Methods</b>	Use simple visuals or graphics to illustrate the materials used and the steps in the development process.
<b>Results and Discussion</b>	Showcase the results of your innovation and compare them to expectations or existing solutions. Use graphs, charts, or infographics to present data effectively.
<b>Benefits</b>	Emphasize the potential benefits of your innovation to the target users or the community.
<b>Visuals</b>	Include images, diagrams, and photographs to enhance the visual appeal and understanding of your innovation.
<b>Conclusions</b>	Summarize the main conclusions and the broader implications of your innovation.
<b>Future Development</b>	Discuss potential future developments or applications of your innovation.
<b>Developers' Name</b>	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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**APPENDIX 13:**  
 Innovation Expo Judges Form

<b>TITLE OF THE PROECT</b>		
<b>INDIVIDUAL/TEAM</b>		
<b>PROJECT PROPONENT/S</b>		
<b>CRITERIA</b>	<b>WEIGHT</b>	<b>RATING</b>
<b>ORIGINALITY AND CREATIVITY</b> <small>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.</small>	25%	
<b>COMMUNITY CONNECTION &amp; IMPACT</b> <small>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.</small>	20%	
<b>MARKET ATTRACTIVENESS</b> <small>This criterion examines the commercial viability of the innovation. It considers the potential market demand, scalability, and sustainability of the project.</small>	15%	
<b>FUNCTIONALITY AND TECHNOLOGY VALIDATION</b> <small>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.</small>	25%	
<b>PRESENTATION AND PRODUCT PRESENTATION</b> <small>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.</small>	15%	
<b>TOTAL</b>		
<b>COMMENTS:</b>		

Signature Over Printed Name  
 Date Signed:



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**Project Evaluation Form**

Title of Research Project: \_\_\_\_\_

Project Proponent/s: \_\_\_\_\_

School: \_\_\_\_\_

Project Category:  Life Science  
 Physical Science  
 Mathematics and Computational Sciences  
 Robotics and Intelligent Machines  
 Team  Individual

CATEGORY

SCORE

**Creative Ability (30)**

- Does the project show creative and originality in the:
  - Question asked?
  - Approach to solving the problem?
  - Analysis of the data?
  - Interpretation of the data?
  - Use of equipment?
  - Construction or design of new equipment.
- Creative research should support an investigation and help answer a question in an original way.
- 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.

**Scientific Thought or Engineering Goals (30)**

**Scientific Thought**

- Is the problem stated clearly and unambiguously?
- Was the problem sufficiently limited to allow plausible attack? Good scientists can identify important problems capable of solutions.
- Was there a procedural plan for obtaining a solution?
- Are the variable clearly recognized and defined?
- If controls were necessary, did the student recognize their need and were they used correctly?
- Are there adequate data to support the conclusions?
- Does the finalist/team recognize the data's limitations?
- Does the finalist/team understand the project's ties to related research?
- Does the finalist/team have an idea of what further research is warranted?
- Did the finalist/team cite scientific literature, or only popular literature (e.g. local newspapers, magazines)?

**Engineering Goals (if engineering project)**

- Does the project have a clear objective?
- Is the objective relevant to the potential user's needs?



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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 alternatives or application?
6. Has the solution been tested for performances under the conditions of use?

**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 and dates) of the experiment recorded in the research data logbook?

**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?

**Clarity (10)**

1. How clearly does the finalist/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. Did the finalist/team perform all the project work, or did someone help?

TOTAL SCORE: \_\_\_\_\_

\_\_\_\_\_  
Signature over Printed Name of the Judge



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