



Republic of the Philippines  
**Department of Education**  
REGION IV-A CALABARZON  
**SCHOOLS DIVISION OF BATANGAS**

24 Sep 2025

DIVISION MEMORANDUM

No. 543, s. 2025

**UPDATED GUIDELINES AND MECHANICS ON THE CONDUCT  
OF THE 2025 DIVISION SCIENCE AND TECHNOLOGY FAIR**

To: Assistant Schools Division Superintendents  
Chief- Curriculum Implementation Division (CID)  
Chief- School Governance and Operations Division (SGOD)  
Education Program Supervisors  
Public Schools District Supervisors  
Public and Private Secondary School Heads  
All Others Concerned

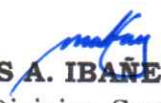
1. Relative to Division Memorandum No. 352, s. 2025 titled 2025 Division Science and Technology Fair (DSTF), this office, through the Curriculum Implementation Division, announces the qualified entries to the 2025 Division Science and Technology Fair Congress and Presentation.
2. Furthermore, due to unfavorable weather conditions, the conduct of the 2025 Division Science and Technology Fair is hereby rescheduled from September 26, 2025, to October 2, 2025. Accordingly, the venue is transferred to Rosario East Central School, in lieu of Baybayin Integrated National High School, Baybayin, Rosario, Batangas.
3. The following are the enclosures for reference:
  - a. Enclosure No. 1: List of Qualified Entries (In No Particular Order)
  - b. Enclosure No. 2: Technical Working Group and Judges
  - c. Enclosure No. 3: DSTF Congress and Presentation Mechanics
3. For the school delegation, food, traveling expenses, and other incidental expenses of the official participants relative to the conduct of this activity shall be charged against local or MOOE funds subject to the usual government accounting and auditing rules and regulations. For the Division Technical Working Group, foods, DSTF materials, traveling expenses, and other incidental expenses shall be charged against Division MOOE subject to the usual government accounting and auditing rules and regulations.
4. This memorandum shall serve as the attendees' Travel Order.
5. Other provisions stipulated in DM No. 352, s. 2025 remain enforced.



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6. Immediate dissemination of this Memorandum is desired.

  
**MARITES A. IBANEZ, CESO V**  
Schools Division Superintendent

Encl. As stated

Reference: Division Memorandum No. 352, s. 2025

To be indicated in the Perpetual Index under the following subject:

Issuances- Division Memorandum

*EBD/ UPDATED GUIDELINES AND MECHANICS ON THE CONDUCT OF THE 2025 DIVISION SCIENCE  
AND TECHNOLOGY FAIR/ S2-112081/09/24/2025*



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**Enclosure 1. List of Qualified Entries (In No Particular Order)**

**Life Science – Individual**

| Entry Code | School                        | Sub-office    | Students                  | Coach                   | Research Title                                                                                                                                                                    |
|------------|-------------------------------|---------------|---------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LS-I-01    | Balayan National High School  | Balayan East  | Zoci Alleine R. Viernes   | Kerwin M. Tumambing PhD | BIO-MOLAC: Bioprocessing of Molasses for Lactic Acid Creation: Evaluation of the Effectiveness of Different Types of Molasses in the Production of Lactic Acid through Probiotics |
| LS-I-02    | Lemery Senior High School     | Lemery        | Rayael G. Medina          | Eugenio C. Magdales     | Growth, Yield, and Toxicological Assessment of Oyster Mushroom ( <i>Pleurotus ostreatus</i> ) Cultivated on Ink-Contaminated Paper Waste via Brine Shrimp Lethality Assay         |
| LS-I-03    | Bayorbor National High School | Mataasnakahoy | Prince Michael A. Vergara | Analyn K. De Las Alas   | Sustainable Biofuel from the Sea and Rooftops: A Viability Study of <i>Acrosiphonia mertensii</i> (Green Rope) and <i>Sargassum crassifolium</i> (Brown Algae)                    |

**Life Science – Team**

| Entry Code | School                           | Sub-office   | Students                                                                                      | Coach                    | Research Title                                                                                                                                                                             |
|------------|----------------------------------|--------------|-----------------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LS-T-01    | San Pascual Senior High School 1 | San Pascual  | Christ Lear Jude D. Barit<br>Joensaki D. Garcia<br>Jeanne D. Sumiog                           | Alvin S. Macalalad       | HYDROLEAF: Hydroponic System Project Designed for Strategic Practices for Advancing Compact Environment in School Gardens                                                                  |
| LS-T-02    | Lemery Senior High School        | Lemery       | Alexa Jhoanne Brosoto<br>Gracedenisse D. Cueto<br>Chloe Margarette M. Enriquez                | Eugenio C. Magdales      | Microplastic Contamination in the Gastrointestinal Tract and Muscles Tissue of Cage-Cultured Nile Tilapia ( <i>Oreochromis niloticus</i> ) in the East of Taal Lake, Batangas, Philippines |
| LS-T-03    | Balayan National High School     | Balayan East | Cyrill Jilliane R. Aquino, ,<br>Giovanni D. Atienza<br>Sharleez Hasan<br>Mohamed M. Alsuwaidi | Geminiana C. Macalindong | Project BOOST: Biodegradation Optimization of Sugarcane ( <i>Saccharum officinarum</i> ) Agricultural Wastes Treatment using Carabao Manure Biostimulant                                   |



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**Physical Science – Individual**

| Entry Code | School                       | Sub-office | Students                  | Coach               | Research Title                                                                                                                    |
|------------|------------------------------|------------|---------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| PS-I-01    | Calatagan Senior High School | Calatagan  | Marie Cailyn C. Fernandez | Erika M. Layon      | Activated Sugarcane ( <i>Saccharum officinarum</i> ) Leaf and Corn ( <i>Zea mays</i> ) Cob as Oil Spill Adsorbent Pad             |
| PS-I-02    | Tuy Senior High School       | Tuy        | Rexel C. Barrameda        | Lucky Ivy V. Visto  | Carbon Nanotubes from <i>Carica papaya</i> (Papaya) Dried Leaves for Advanced Energy Storage                                      |
| PS-I-03    | Lemery Senior High School    | Lemery     | Caitlin Faye C. Del Mundo | Eugenio C. Magdales | Efficacy of Eggshell Powder as White Pigment Alternative to Titanium Dioxide (TiO <sub>2</sub> ) in Epoxy-based Paint Formulation |

**Physical Science – Team**

| Entry Code | School                                 | Sub-office   | Students                                                                        | Coach                        | Research Title                                                                                                                                                                        |
|------------|----------------------------------------|--------------|---------------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PS-T-01    | Bauan Technical Integrated High School | Bauan West   | Ashley Mae M. Clarete<br>Jhenela Mae M. Dalangin<br>John Patrick A. Evangelista | Maricel D. Espinili          | A Hybrid Solar-Wind System for Continuous and Real-Time Coastal Water Quality Monitoring                                                                                              |
| PS-T-02    | Balayan National High School           | Balayan East | Aliah A. Del Rosario<br>Iara Hope M. Hernandez<br>Raven Antonio M. Roque        | Kerwin M.<br>Tumambing PhD   | PROJECT BRIQUEMA – Briquette Machine Construction: The Design and Construction of Biomass Briquette Machine and Characterization of Biomass Briquettes from Localized Waste Materials |
| PS-T-03    | Malvar Senior High School              | Malvar       | James S. Jomuard<br>Princess Kyna M. Sabeli<br>Carl Justin N. Serut             | Raechelle Joyce C.<br>Siudad | Step On Watts: Harnessing Footstep Energy through Piezoelectric Sensors                                                                                                               |



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**Mathematics and Computational Science – Individual**

| Entry Code | School                        | Sub-office  | Students                       | Coach               | Research Title                                                                                                      |
|------------|-------------------------------|-------------|--------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------|
| MCS-I-01   | Lucsuhin National High School | Calatagan   | Cassandra Isabel M. Laderas    | Jeffrey R. Abad     | ROVE-BOT: Recycled RC Car for Data Collection                                                                       |
| MCS-I-02   | Lemery Senior High School     | Lemery      | Marlverson Heindrix O. Rosales | Analie B. Atienza   | Early Warning System for Dengue: A Time Series Forecasting Model for Lemery, Batangas                               |
| MCS-I-03   | Alalum National High School   | San Pascual | Alissa June T. Manalo          | Cherie B. Balentoza | Dengue Transmission Modeling: A Weather-Driven SIR Model with Climate-Sensitive Parameters in Localized Communities |

**Mathematics and Computational Science – Team**

| Entry Code | School                                 | Sub-office   | Students                                                                              | Coach                                                                        | Research Title                                                                                                                       |
|------------|----------------------------------------|--------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| MCS-T-01   | Bauan Technical Integrated High School | Bauan West   | Daniel Alexis A. Manibo<br>Areylanna B. Malangis<br>Jayvee Prescott A. Evia           | Justin Micah B. Comia                                                        | Molecular Mile: An Educational Dice-Board Game for Enhancing Comprehension And Mastery Of Gas Laws                                   |
| MCS-T-02   | Balayon Senior High School             | Balayon West | Antonio Benedict A. Guevarra<br>Rodolfo Dominic A. Guevarra<br>Jazmine Joy A. Magahis | Cecilia A. De Castro, Pauline Misty Panganiban, Maricel Patulot, Ariel Prigo | Optimizing Vehicle Queues at Balayan Intersection using Reinforcement Learning with Inputs from M/M/2 Queuing Model                  |
| MCS-T-03   | Talisay Senior High School             | Talisay      | Frankie R. Gardoce<br>Ariane Myle F. Ponce<br>Marjorie R. Toledo                      | Engr. Richie G. Balba                                                        | Effectiveness of the Unified Variable System in Enhancing Algebraic Competency of Senior High School Students: A Mixed-Methods Study |



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**Robotics and Intelligent Machine – Individual**

| Entry Code | School                           | Sub-office    | Students                  | Coach                  | Research Title                                                                                                                                                                    |
|------------|----------------------------------|---------------|---------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RIM-I-01   | San Juan Senior High School      | San Juan East | Justin Charles N. Goce    | Jezreel A. Dollente    | CleanTech Station: Development of a Stationary Autonomous Robot Utilizing Sensors to Identify and Segregate Green and Red Waste Materials for Sustainable Campus Waste Management |
| RIM-I-02   | Dr. Bonifacio A. Masilungan INHS | San Jose      | Kean Hansen Q. Regencia   | Alona B. Talag         | Design and Implementation of an Arduino-Driven Smart Trash Bin                                                                                                                    |
| RIM-I-03   | Alalum National High School      | San Pascual   | Arc Jean V. Dalawangbayan | Kimberly Mae R. Abacsa | Guardian Bot Detecting Human Presence in Rooms Using Weebot Sensors                                                                                                               |

**Robotics and Intelligent Machine – Team**

| Entry Code | School                      | Sub-office   | Students                                                                                | Coach                               | Research Title                                                                                                     |
|------------|-----------------------------|--------------|-----------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| RIM-T-01   | Santiago Senior High School | Malvar       | Rihanna Nichole A. Orias<br>Madelyn C. Reyes<br>King Khamie D. Llanes                   | Michael John L. Miranda             | Multi-Purpose TechnoTank                                                                                           |
| RIM-T-02   | Balayan Senior High School  | Balayan West | John Jester T. De los Reyes, ,<br>Abraham Jonnas M. Mendoza<br>Xerxes Zedric D. Jimenez | Jay C. Tibayan, John Aldrin Dimaala | PICO: Prevention and Ignition Control Operation for a Breath-Based Helmet Alcohol Detection System for Road Safety |
| RIM-T-03   | Lucsuhin National School    | Calatagan    | Jan Kairo D. Balbanida<br>Aaron Mathew D. Caunceran<br>Patrick Angelo F. Canlapan       | Sarah Jane C. Capacia               | RONDA: Robotic Observer for Natural Disaster Assessment                                                            |



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**Science Innovation Expo – Individual**

| Entry Code | School                       | Sub-office              | Students               | Coach                    | Research Title                                                                                                              |
|------------|------------------------------|-------------------------|------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| SIE-I-01   | Laiya Integrated NHS         | San Juan East           | Nicole G. De Chavez    | Caselyn C. Sebuc         | Chlorofuel: Bioconversion of Fallen Leaves into Sustainable Biofuel for Energy Efficiency and Environmental Viability       |
| SIE-I-02   | Lemery Senior High School    | Lemery                  | Yvine E. Villavicencio | Engr. Rege C. Comia      | Flood Sense: A Smart Flood Sensor Device and Monitoring System with Buzzer Alarm and SMS Notification Alert                 |
| SIE-I-03   | Balayan National High School | Balayan East Sub-Office | Gabriel A. Julongbayan | Kerwin M. Tumambing, PhD | PROJECT PASS – Personal Attendance Scanning System: Development and Programming of Student Attendance System Using 1D Codes |

**Science Innovation Expo – Team**

| Entry Code | School                          | Sub-office   | Students                                                                    | Coach                    | Research Title                                                                                                |
|------------|---------------------------------|--------------|-----------------------------------------------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------|
| SIE-T-01   | Lemery Senior High School       | Lemery       | Ma. Isabel B. Aguirre<br>John Mico D. Guambor<br>Kacey Clark T. Razon       | Engr. Rege C. Comia      | AUTOCRAY: Automated Crayfish Feeder                                                                           |
| SIE-T-02   | Nasugbu East SHS                | Nasugbu East | Zyrus Q. Bugagao<br>Franjz Gian D. Cudiamat<br>Noriel N. Palmiano           | Eron C. Pangilinan       | Ergonomic Innovation in Learning: A 180° Rotational Flexi-Desk Chair for Adaptive Learning Spaces             |
| SIE-T-03   | Ibaan Saint James Academy, Inc. | Ibaan        | Ervin Jan M. Caponpon<br>Mikaela Rhayne E. Sinahon<br>Ivy Rose A. Untiveros | Engr. Melannie P. Adante | Sustainable Solid Waste Management: A Thermoelectric Waste-to-Energy Generator with Integrated Air Filtration |



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**Enclosure 2: Technical Working Group and Judges**

| SN | Name                       | Role                        | Sex | Designation                  | School/Office    | Sub-office/Category |
|----|----------------------------|-----------------------------|-----|------------------------------|------------------|---------------------|
| 1  | Emerson B. Dalangin        | Program Manager             | M   | Division Science Coordinator | CID              | SDO Batangas        |
| 2  | Elizabeth R. Tolentino PhD | Program Manager / Judge     | F   | Education Program Supervisor | CID              | SDO Batangas        |
| 3  | Dr. Marilyn C. Marasigan   | Host                        | F   | Principal IV                 | Rosario East CS  | Rosario East        |
| 4  | Jocelyn M. Manset          | Facilitator/Judge           | F   | Principal IV                 | DJAPINHS         | Ibaan/PS            |
| 5  | Dr. Jean P. Magsaysay      | Facilitator / Judge         | F   | Principal II                 | Alalum NHS       | San Pascual /SIE    |
| 6  | Dr. Maxima M. Javier       | Facilitator                 | F   | Principal I                  | Inicbulan NHS    | Bauan West / RIM    |
| 7  | Dino V. Busilig            | Facilitator                 | M   | Head Teacher II              | Calatagan NHS    | Calatagan/ LS       |
| 8  | Marissa A. Quinia          | Documenter                  | F   | Asst. School Principal II    | Buhaynasapa INHS | San Juan West       |
| 9  | Rechiel Garcia-Guerra      | Secretariat / Support Staff | F   | Principal I                  | Tingloy NHS      | Tingloy             |
| 10 | Manirosso S. Berjuega      | ICT / Technical Support     | M   | Teacher III                  | Rosario East CS  | Rosario East        |
| 11 | Imelda M. Reyes            | Registration Focal Person   | F   | Master Teacher I             | Rosario East CS  | Rosario East        |
| 12 | Lisa M. Del Mundo          | Master of Ceremony          | F   | Master Teacher I             | Rosario East CS  | Rosario East        |
| 13 | Diane Guteza               | Welfare Officer             | F   | Nurse II                     | SGOD             | Rosario East        |
| 14 | Julius Espina              | Welfare Officer             | F   | Nurse II                     | SGOD             | Rosario East        |
| 15 | Venice M. Laksama          | Facilitator/Documenter      | F   | Teacher III                  | Taal National HS | Taal /MCS           |
| 16 | Arlene C. Saligao          | Facilitator                 | F   | Principal II                 | Sapangan ES      | San Juan West / MCS |
| 17 | Imelda Tapero              | Facilitator                 | M   | Principal III                | Malvar CS        | Malvar/ MCS         |
| 18 | Leinard Dan C. Lacdao      | Support Staff               | F   | Teacher III                  | Baybayin INHS    | Rosario East        |



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| SN | Name                                    | Role  | Sex | Designation                  | School/Office           | Category                              |
|----|-----------------------------------------|-------|-----|------------------------------|-------------------------|---------------------------------------|
| 19 | Loverealjoy A. Lopez                    | Judge | F   | Principal I                  | Pinagbayanan INHS       | Life Science                          |
| 20 | Dra. Khareen M. Cadano                  | Judge | F   | Medical Officer III          | SGOD                    | Life Science                          |
| 21 | Dr. Randie B. Atienza                   | Judge | M   | Education Program Supervisor | CALABARZON              | Life Science                          |
| 22 | Engr. Ma Imma Concepcion C. Rivera      | Judge | F   | Administrative Officer II    | Personnel               | Physical Science                      |
| 23 | Engr. Irene Grace Q. Gonzales           | Judge | F   | Administrative Officer IV    | Records                 | Physical Science                      |
| 24 | Ar. Henrich F. Gabi                     | Judge | F   | Technical Assistant IV       | SGOD                    | Robotics and Intelligent Machines     |
| 25 | Engr. Jesriel Anne A. Macaraig - Abutan | Judge | F   | Technical Assistant III      | SGOD                    | Robotics and Intelligent Machines     |
| 26 | Engr. John Albert L. Tiquiz             | Judge | F   | Engineer III                 | SGOD                    | Robotics and Intelligent Machines     |
| 27 | Oliver R. Guevarra                      | Judge | M   | Head Teacher II              | Bayorbor NHS            | Science Innovation Expo               |
| 28 | Janet G. Apolar                         | Judge | F   | Principal II                 | Tanagan ES              | Science Innovation Expo               |
| 29 | Everlyn D. Endozo EdD                   | Judge | F   | Head Teacher I               | Dr. Juan A. Pastor INHS | Mathematics and Computational Science |
| 30 | Arnel C. Evangelista PhD                | Judge | M   | Principal IV                 | Laya INHS               | Mathematics and Computational Science |



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**Enclosure No. 3 DSTF Congress and Presentation Mechanics**

**1. Registration and Submission of Research Entries:**

- a. Participants should arrive at the event venue on the specified date and time for setup and registration.
- b. Each participant or team must submit three hard copies of their research entries to the secretariat onsite, along with a properly colored folder/cover page based on their category:

| Category                                           | Code  | Color Coding |
|----------------------------------------------------|-------|--------------|
| Life Science-Individual                            | LS-I  | Green        |
| Life Science -Team                                 | LS-T  | Yellow       |
| Physical Science-Individual                        | PS-I  | Blue         |
| Physical Science-Team                              | PS-T  | Orange       |
| Robotics and Intelligent Machines                  | RIM-I | Pink         |
| Robotics and Intelligent Machines-Team             | RIM-T | Brown        |
| Mathematics and Computational Science – Individual | MCS-I | Red          |
| Mathematics and Computational Science – Team       | MCS-T | Purple       |
| Science Innovation Expo                            | SIE-I | White        |
| Science Innovation Expo                            | SIE-T | Black        |

**2. Research Entry Requirements:**

- a. All research entries should include the following: (1) Research Plan, (2) Project Data Logbook, and (3) Research Paper with proper format. Refer to Appendix 2 of the handbook for the contents and description of each form. The format for the innovation expo is described in Appendix 5. They must also attach the necessary ISEF Forms required in their projects. The copy of the handbook can be accessed at <https://bit.ly/SMTF-Handbook>.
- b. The Tuklas Display Board must adhere to the format and safety guidelines described in Appendix 3

**3. Presentation Guidelines:**

- a. Participants are required to prepare a 5-10 minute presentation to showcase their research findings and innovations.
- b. The student researchers must be in their formal attire during the conduct of DSTF.
- c. Presentation times will be assigned, and participants should be prepared to present during their designated slots.
- d. Participants must be ready to answer questions and provide explanations during the presentation.

**4. Evaluation and Judging:**

- a. A panel of qualified judges will evaluate the research entries and presentations.
- b. Judges' decisions are final and not subject to appeal.

**5. Awards and Recognition:**

- a. Awards will be given to outstanding participants in various categories. The first-place winners will represent the division in the Regional Science and Technology Fair.
- b. Special awards and recognitions may also be given for exceptional achievements or contributions.

**6. Disqualification:**

- a. Participants found to have plagiarized or misrepresented their work may be disqualified from the competition.
- b. Participants must follow all rules and guidelines outlined in the mechanics and any additional instructions provided by the organizing committee.