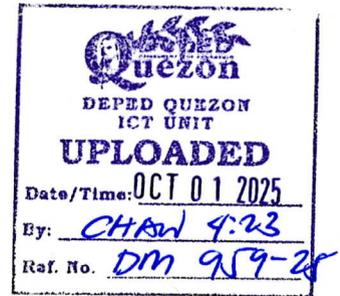




Republic of the Philippines
Department of Education
Region IV-A
SCHOOLS DIVISION OF QUEZON PROVINCE



30 September 2025

DIVISION MEMORANDUM
DM No. 959, s. 2025

ANNOUNCEMENT OF QUALIFIERS IN THE TUKLAS, NATIONAL SCIENCE INNOVATION EXPO AND RESEARCH CONGRESS

To: Assistant Schools Division Superintendents
Chief, Curriculum Implementation Division
Education Program Supervisors
Public Schools District Supervisors
Elementary School Principals
Secondary School Principals
All Others Concerned

1. In reference to DM No. 797 s.2025 titled “2025 Division Science and Technology Fair (DSTF)”, this Office announces the qualifiers in the **TUKLAS, NATIONAL SCIENCE INNOVATION EXPO AND RESEARCH CONGRESS**. These qualifiers will showcase and present their research outputs and innovation during the 2025 DSTF which will be held at Lopez National Comprehensive High School, Lopez Quezon on October 2-3, 2025.
2. The names of the project proponents, coaches, and their respective schools are provided in the enclosures of this memorandum, as follows: **Tuklas — Enclosure No. 1; National Science and Innovation Expo – Enclosure No. 2; and Research Congress – Enclosure No. 3**
3. Participants are reminded to observe the following guidelines:
 - a. **Tuklas and National Science and Innovation Expo** – Submit three (3) sets of softbound hardcopies of the manuscript to the DSTF Secretariat during the registration. Refer to Enclosure No. 3 of this memorandum for the prescribed format and folder/manuscript color codes. Participants must also bring their project display posters (tarpaulin) for the exhibit and wear formal attire during the presentation.

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- b. Research Congress** – Qualifiers must submit one (1) softbound hardcopy of the manuscript to the DSTF Secretariat during the registration. They are likewise required to bring their project display posters (tarpaulin) for the exhibit and wear formal attire during the presentation.
4. Additional names of the Technical Working Group are listed in Enclosure No. 4.
5. Immediate and widest dissemination of this Memorandum is desired.


ROMMEL CABAUTISTA, CESO V
Schools Division Superintendent

cid-ims/ceao/10/01/2025

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Enclosure No. 1 to DM No. 959, s. 2025

TUKLAS - LIFE SCIENCE

| CATEGORY | RESEARCH TITLE | NAME OF RESEARCH ERS(S) | COACH | SCHOOL |
|------------|--|---|--------------------------|-------------|
| INDIVIDUAL | Physiological and Morphological Responses of Escherichia coli to Simulated Microgravity Using an Arduino-based 2D Clinostat | Kyle Mejin L. Valles | Luningning E. De Villa | QNHS |
| | HoneyVerlon: Synergized Antifungal Activity of Honey, Aloe vera (Aloe barbadensis miller), and Onion (Allium cepa) Against Aspergillus niger, Causal Pathogen of Corn (Zea mays) | Gerann Hushley M. Maningas | Leianne Mae P. De Guzman | QNHS |
| | Seaweed (Sargassum) Waste Extract as a Natural Antifungal Preventive Agent Against Black Sigatoka on Banana (Musa spp.) Leaves | Leean Ximone O. Manicad | Cierrie Ann B. De Luna | DMDPNH S |
| TEAM | From Pest to Productivity: Converting Janitor Fish (Pterygoplichthys spp.) into Fish Amino Acid-Based Organic Fertilizer for Sustainable Agriculture | Dolor AJV, Mallorca MP, Muñoz ERP | | Lusacan NHS |
| | Effectiveness of Mucilage out of Okra (Abelmoschus esculentus) Pods as a Seed Coat and Gamma Irradiation in Response to Temperature and Drought Tolerance of Crisphead Lettuce (Lactuca sativa var. capitata) Seeds under Simulated Drought Conditions | Shyra O. Revillame Venysse A. Fontanil Danica Jane S. Tenorio | Leianne Mae P. De Guzman | QNHS |
| | Phytochemical Analysis and Inhibitory Activity of Spherified Reishi Mushroom (Ganoderma lucidum) and Makahiya (Mimosa pudica) Leaves Extract | Emmanuelette Danielle Lairen V. de los Santos | Luningning E. De Villa | QNHS |

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| | | | | |
|--|---|--|--|--|
| | Against the Physiological Development of <i>Aedes aegypti</i> | Adrian Uzziah R. Tayao Riley A. Carandang | | |
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TUKLAS – PHYSICAL SCIENCE

| CATEGORY | RESEARCH TITLE | NAME OF RESEARCHERS(S) | COACH | SCHOOL |
|------------|--|--|--------------------------|-------------------|
| INDIVIDUAL | BioMesh: Natural Fiber Mesh from Coconut and Hyacinth for Microplastic Adsorption | Cadelina, Sevdred Joseph D. | Leianne Mae P. De Guzman | QNHS |
| | Biodegradation Potential Of Powdered Duhat (<i>Syzygium Cumini</i>) Bark And Bignay (<i>Antidesma Bunius</i>) Leaves As Biostimulants Of <i>Escherichia Coli</i> For Microplastics In Soil | Beltran, John Paul L. | | Quezon Science HS |
| | Mokusaku-Enriched Compost with Coconut (<i>Cocos nucifera</i>) Coir Biochar as Soil Fertility Enhancer | Rhianna D. Pasahol | Leianne Mae P. De Guzman | QNHS |
| TEAM | Examining the sustainability and effectiveness of black fungus (<i>Auricularia polytricha</i>) as biodegradable plastic using experimental methods with laboratory and non-laboratory materials to reduce non-biodegradable plastic waste. | Deazeta, Chloe Anne A. Estrecho, Princess Lyrice P. | Roderick L. Litana | Gumaca NHS |
| | Papaya (<i>Carica papaya</i>) and Kamias (<i>Averrhoa bilimbi</i>) Leaf Extract as Natural Dishwashing Liquid: An Evaluation of the Formulation's Effectiveness in Pursuit of a Sustainable Cleaning Alternative | Kiel Rean L. Ladublan Maria Athena A. Liwalas Shannelle Mae S. Nojor | Roderick L. Litana | Gumaca NHS |
| | Effectiveness Of Corn Cob And Corn Husk-Derived Biochar As Biosorbent For Poultry Wastewater Treatment | Cariño, James Rigor L. Redublo, Amira Jem V. | | Quezon Science HS |

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| | | Villapando, Alexander Jacob P. | | |
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TUKLAS – MATHEMATICAL AND COMPUTATIONAL SCIENCE

| CATEGORY | RESEARCH TITLE | NAME OF RESEARCHERS(S) | COACH | SCHOOL |
|------------|---|---|------------------------|-------------------|
| INDIVIDUAL | Advanced Multi-objective Resource Optimization Algorithm (AMROA): Meta-Heuristic Approach on Sustainable Irrigation Management Addressing Cultural Eutrophication Against Usual Differential Evolution Equation | Ken Xylon B. Malolos | Luningning E. De Villa | QNHS |
| | Computational Fluid Dynamics Analysis of Fluid Flow Through Three-Dimensional Porous Fractals: Menger Sponge and Sierpinski Tetrahedron | Jonas Romasanta S. | Luningning E. De Villa | QNHS |
| | Mathematical Modeling and Predictive Analysis of Evaporation using RICE-WISE Model in Irrigated Rice Paddies for Optimized Irrigation Scheduling” | Kein Andrei M. Francisco | Gideon Louis T. Trañas | Lopez NCHS |
| TEAM | Ec-Pro: Electrical Conductivity Prediction Via Regression Optimization For Hydroponic System | Earl Jann Mae A. Baltar Sofia Angela A. De Castro Louise Jun C. Lacasad | | Quezon Science HS |
| | Development of a Markovian Pollination Efficiency Index for Optimizing Pollination Efficiency Using Open Source Bee Foraging Data | Amir Shan L. Alqaydi Carlos Jacobo J. Macalinao McUriel P. Rivadulla | Leianne M. De Guzman | QNHS |

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| | | | | |
|--|--|---|------------------------|------------|
| | FORMATH: Development of Formula-Based Mathematical Mobile Website for Comprehensive Learning of STEM Students | Princess Janelle T. Azuela Ashley Nicole B. Ladines Wiljhen A. Mancenido | Jezreil O. Barroquillo | PSLIS |
| | Integrating Heat Dynamics into Universal Soil Loss Equation (USLE): A Unified Equation for Seasonal Erosion Prediction | James Khyle M. Banaria James Kendrick V. Orgeta Laurence Angelo N. Salumbides | Angelo C. Angeles | Lopez NCHS |

TUKLAS – ROBOTICS AND INTELLIGENT MACHINES

| CATEGORY | RESEARCH TITLE | NAME OF RESEARCHERS(S) | COACH | SCHOOL |
|------------|--|------------------------------|--------------------------|-------------------|
| INDIVIDUAL | AQUA-SMART: Aquaponics and Aquaculture Self-Sustaining Monitoring System with Automated Feeding, Water Quality Control, and Renewable Solar Tracking | Jancis Aaliyah Almarinez | Harold Bert L. Distor | DMDPNHS |
| | Maizer: Mobile And Autonomous Light Trap Robot For Pest Management And Monitoring | Ella, Juan Marcus Antonio S. | | Quezon Science HS |
| | Airborne-MicroPlastic Detector (A-MPD): A Particulate Sensor Utilizing Digital Microscopy and Image Recognition for On-Site Detection of Airborne Microplastics and Particulate Analysis | Matt Damian L. Reig | Leianne Mae P. De Guzman | QNHS |
| TEAM | ODY-SEA (Sea Expedition Assistant): A Computer Vision-Based System for | Jilliane Faye Cagujas | Angelo C. Angeles | Lopez NCHS |

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| | Identifying Invasive Clown Knifefish (<i>Chitala ornata</i>) | Wrenzcel Anne Restom | | |
| | R-COMB: Remote-Controlled Oil Mitigation Boat with Replaceable Coconut (<i>Cocos nucifera</i>) Coir and Human Hair Fiber Pads for Oil Spill Adsorption | Andrei U. Aman Princess Jhannea L. Dumpal Pauleene Charl I. Oliveros | Harold Bert L. Distor | DMDPNHS |
| | PYROBOT (Firefighter Buddy): Remote Controlled Firefighting Robot with Autonomous Extinguish System | Renz A. Angeles Prince Zallen Deiv B. Verdera, John Gabriel P. Vibora | Angelo C. Angeles | Lopez NCHS |

NATIONAL SCIENCE INNOVATION EXPO

| CATEGORY | RESEARCH TITLE | NAME OF RESEARCHERS(S) | COACH | SCHOOL |
|------------|---|---|------------------------|-----------------------|
| INDIVIDUAL | SEEKER: Smart Early-detection and Extinguishing Kit with Email and SMS Alerts and Real-time Analytics | Alyssandra Sophia M. Emralino | Gladys B. Mendoza | Lutucan Integrated HS |
| | SolarHydroFlow: Development of Automated Irrigation System Integrated with Environmental and Farm Monitoring Mechanism | Jhon Anthony D. Orgena | Gideon Louis T. Trañas | Lopez NCHS |
| | “HARVEST: Heat-Assisted Rice Ventilation using Efficient Solar Technology – A Hybrid AC/DC Drying System for Rice Drying” | Justin Allen E. Bataclan | Gideon Louis T. Trañas | Lopez NCHS |
| TEAM | FERRION: Bio-based Ferrofluid Filtration System for Microplastic Removal in Water | Yuriah Ivy P. Crisologo Jhazmine Joy J. Maaliw | Luningning E. De Villa | QNHS |

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| | | Wayne Nicholas C. Allarey | | |
| | Powering Individual Households Through Pico Energy Solutions (PIPES): A Sustainable In-Pipe Micro Hydroelectric Generator Using Household Water Flow | John Carlo Artillaga Cielo Marie Garcia, Pitt Markus M. Perez, | John Michael A. Castillo | Recto MNHS |
| | AgriBiST: Biodegradable Seedling Tray out of Loam Soil, CompoBiST, Sweet Potato (Ipomoea batatas) Starch Bioplastic, and Coconut (Cocos nucifera) Fiber | Ralph Timothy D. Carandang Faith Angela S. Lagaya Jerssine Grace L. Lapid | Luningning E. De Villa | QNHS |

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Enclosure No. 2 to DM No. 959, s. 2025

RESEARCH CONGRESS

RESEARCH CONGRESS – LIFE SCIENCE

| CATEGORY | RESEARCH TITLE | NAME OF RESEARCHERS(S) | COACH | SCHOOL |
|------------|--|------------------------------|------------------------|------------|
| INDIVIDUAL | The Utilization of Marigold (Tagetes Erecta) Leaf Extract as a Lightening Patch for Reducing Varicose Veins Among Adult Women: An Experimental Study | Jamaica Nichelle B. Requiron | Roderick L. Litana | Gumaca NHS |
| | The Potential Property of Blumea balsamifera (Sambong) leaves' extract as an anti-microbial balm stick against Staphylococcus aureus | Xonia Yvonnee J. Gervacio | Angelo C. Angeles | Lopez NCHS |
| | “Therapeutic Efficacy of Allium sativum (garlic) and Mentha piperita (peppermint)Extracts as a Natural Alternative Treatment for Tonsillitis” | Rein Lexi E. Pacurza | Gideon Louis T. Trañas | Lopez NCHS |
| | Potential of Basil (Ocimum basilicum) leaf extract as a Biopesticide against the mortality rate of Rice black bug (Scotinophara coarctata) | Ashlyn Rae Rouxii D. Rebanal | Angelo C. Angeles | Lopez NCHS |
| | Quantifying the Relationship Between Fertilizer and Fresh Water Accessibility in Algal Bloom Formation | Estelle Kezia A. Chavez | Gideon Louis T. Trañas | Lopez NCHS |

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| | Sargassum Seaweed (F. Sargassaceae) and Banana Peel (Musa sapientum) Extract as a Fertilizer For Lettuce (Lactuca Sativa) Plant | Athena Anneliese A. Araya | Ma. Camille Anne M. Guevarra | Atimonan NCHS |
| | Bay (Laurus nobilis) Leaves and Oregano (Origanum vulgare) Leaves Against Rice Weevils | John Lorenz P. Mapaye | Ma. Camille Anne M. Guevarra | Atimonan NCHS |
| | Analysis of the Impact of Regenerative Practices on Tomato Yields | Elyza G. Valenzuela | Karlo C. Claridades | PSLIS |
| | Banana Trunk Pseudostem As An Antibacterial Soap Against Staphylococcus Aureus | Jared P. Gucon | Grace Joy A. Salumbides | PSLIS |
| | Potential of Lemongrass (Cymbopogon citratus) Essential Oil Inhalation in Boosting Memory Retention among STEM students | Rafael Jose S. Aguilar | Karlo C. Claridades | PSLIS |
| | Evaluation Of Insecticidal Properties Of Black Jack (Bidens Pilosa L.) Leaf Extract And Makabuhay (Tinospora Crispa (L.) Hook.F. & Thomson) Stem Extract Against Mealybugs (Pseudococcidae) | Hamza M. Ghnaim | | Quezon Science HS |
| | Bio Enhanced Alga-Feed Pellet: Exploring Lyngbya as a Key Ingredient i Pelletized Chicken Nutrition | Shaun Randall P. Rabano | John Michael A. Castillo | Recto MNHS |
| TEAM | Antimicrobial Property of Allium sativum | Mary Margarette A. Apoin | Angelo C. Angeles | Lopez NCHS |

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| (Garlic) Extract Against Staphylococcus aureus | Princess Angel V. Arit Deanna Jane C. Gilbuena | | |
| Evaluating the Antibacterial Potential of Dillenia philippinensis Rolfe (Katmon) and Pandanus amaryllifolius Roxb (Pandan) Leaves Extracts against Escherichia coli | Joervy Zedkiel M. Leorin Meagan Gabrielle M. Bellen Carlyn Angela L. Ibarreta | Gideon Louis T. Trañas | Lopez NCHS |
| Jasmine (Jasminum) Flower Extract and Pomelo (Citrus maxima) Leaves Extract as Biopreservative to Lakatan (Musa acuminata) | Eunice I. Santos Alleah Faye F. Matriano Elhaine Patrice N. Paleracio | Ma. Camille Anne M. Guevarra | Atimonan NCHS |
| Antifungal Properties of Onion (Allium cepa) and Chili Pepper (Capsicum annuum) Leaf Extracts in Controlling Black Sooty Molds (Capnodium spp.) on Atis (Annona squamosa) | Dirk Arjell E. Tanco Exel John M. Tolentino | Ma. Camille Anne M. Guevarra | Atimonan NCHS |
| Repellent Potential of Guava (Psidium) Leaves, Kamias (Averrhoa bilimbi) Leaves, Garlic (Allium sativum), and Pomelo (Citrus maxima) Peel Extracts against Houseflies (Musca domestica) | Sophia Jaela B. Detorio Ella Mae C. Escarda Marion Corvin C. Pasacsac | Regine Martinez – Ruelo | DMDPNHS |
| Insecticidal Property of Kamias (Averrhoa bilimbi), Coconut vinegar (Cocos nocipera), and | Eloisa Fredaline P. Samarita Anthony C. Martinez | Grace Joy A. Salumbides | PSLIS |

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| | Calamansi (Citrus microcarpa) Mixture Against Coconut Hispine Beetle (Brontispa Longissima) | Carl Alfred V. Oblefias | | |
| | Larvicidal Activity Of Papaya Leaves (Carica Papaya L.) And Blue Ternate Flower (Clitoria Ternatea) Extracts Against Mosquitoes (Aedes Aegypti) | Dashee Yochana S. Tinamisan Crystalyn O. Cademia Jasmeet Bless P. Mondilla | Shiela D. Oblea | PSLIS |
| | Chamomile (Matricaria chamomilla) and Its Effect on the Germination and Growth of Rice (Oryza sativa) | Zeus Emerson I. Villanueva Syh Jay L. Omlas Mikayla Vennice A. Salvatierra | Karlo C. Claridades | PSLIS |
| | Synergized Activity of Bee Pollen from Stingless Bees (Tetragonula biroi) and Soursop (Annona muricata Lin.) Leaves Against Pseudomonas aeruginosa, a Bacterial Pathogen Causing Pneumonia | Precious Faith Nathalie M. Llaneta Christine Nicole D. Moreno Mark Johncen C. Yaguel | Leianne Mae P. De Guzman | QNHS |
| | Synergistic Effects Of Pigeonberry (Rivina Humilis L.) And Insulin Plant (Chamaecostus Cuspidatus) Extracts Against Citrus Huanglongbing (Candidatus Liberibacter Asiaticus) In Calamansi Shrub (Citrus × Microcarpa) | Katrina Zofia L. Alegre Allan Gabriel R. Aman Cadence Rayne A. Makipagay | | Quezon Science HS |

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RESEARCH CONGRESS – PHYSICAL SCIENCE

| CATEGORY | RESEARCH TITLE | NAME OF RESEARCHERS(S) | COACH | SCHOOL |
|------------|--|---------------------------|------------------------|-------------------|
| INDIVIDUAL | Utilization Of Cacao Pod-Husk (Theobroma Cacao L.) Flour As An Alternative Flour | Dave Allen C. Garcia | | Alabat Island NHS |
| | The Efficacy of Lipote (Syzygium polycephaloides) Leaf Extract as a Dual-Purpose Bio-Fertilizer and Bio-Herbicide on | Gian Miguel C. Caparros | | Alabat Island NHS |
| | Extraction of Alternative Eco-friendly Mouse Trap using Breadfruit Sap (Artocarpus altilis) as Natural Adhesive and Pineapple (Ananas comosus) as Organic Attractant | Janrhei F. Palmes | Roderick L. Litana | Gumaca NHS |
| | The Utilization of Pomelo (Citrus maxima) Pith as a Material for Creating Bio Floral Foam: An Experiment on the Longevity and Stability of Cut Flowers | Rameses Timothy D. Baldeo | Roderick L. Litana | Gumaca NHS |
| | Utilizing Coconut Husk with Activated Carbon as Filter for the Reduction of Particulate Matter and Gaseous Traces in Motorcycles Emission | Shaira E. Bitangga | Gideon Louis T. Trañas | 1. Lopez NCHS |
| | LEAFicient and Sustainable Charcoal Briquettes: Producing Biochar from Dry Leaves via Controlled | Frias, Kurl M. | Gideon Louis T. Trañas | 2. Lopez NCHS |

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| Low-Oxygen Carbonization” | | | |
| “Investigating and Developing a Larvicidal Formulation Using Blended Cananga odorata (Ylang-ylang) and Cymbopogon citratus(Lemongrass) Essential Oils Against Mosquito Larvae” | Krishna Fehlianne C. Mangunay | Gideon Louis T. Trañas | 3. Lopez NCHS |
| The Utilization of D-Limonene Extract in Recovering Diesel-Range Hydrocarbons from Pyrolyzed Plastic Waste for Sustainable Fuel Production | Aljane R. Mercado | Gideon Louis T. Trañas | 4. Lopez NCHS |
| Taro (Colocasia esculenta) Leaves Extract and Lagikway (Abelmoschus manihot) Leaves Extract as a Sustainable Waterproofing Agent | Marikit Q. Delvo | Ma. Camille Anne M. Guevarra | Atimonan NCHS |
| Potential Of Mussel Shells (Mythus Edulis), Rice Husk (Oryza Sativa) and Corn Cobs (Zen Mays) as Sustainable Animal Bedding | Denise Lorraine M. Maddawin | Ma. Camille Anne M. Guevarra | Atimonan NCHS |
| ECO-WOOD: Effectiveness of Calamansi (Citrus x microcarpa) Extract, Linseed (Linum usitatissimum) Oil, and Coconut (Cocos nucifera) Oil as Sustainable Conditioning Agents | Aleeyah Remuelyn V. Manalo | Ma. Camille Anne M. Guevarra | Atimonan NCHS |

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| for Bamboo (<i>Bambusa vulgaris</i>) Utensils | | | |
| Mango (<i>Mangifera indica</i> L.) Seed Kernel as Natural Anti-Enzymatic Browning Agent Against Browning and Oxidation in Trimmed Young Coconut (<i>Cocos nucifera</i>) Mesocarp | Huelves, Lei Kaila I. | Cajan, Oliver B. | DMDPNHS |
| Exploring the Potential of Jackfruit (<i>Artocarpus heterophyllus</i>) Resin as a Natural Body Hair Removal Wax | John Ian S. Deapera | Shiela Niña L. Rea-Santes | PSLIS |
| Aloe Vera (<i>Aloe barbadensis</i> Miller)-Infused Indoor Air Purifier as Total Volatile Organic Compounds (TVOCs) and Formaldehyde (HCHO) Remover in Indoor Environment | Kristan O. Hilario | Shiela Niña L. Rea-Santes | PSLIS |
| Blackboard Chalk from Cassava (<i>Manihot Esculenta</i> Crantz) Peel Waste as an Alternative Writing Material | Ren Tristan V. Macalinao | Shiela Niña L. Rea-Santes | PSLIS |
| Sawdust and Rice (<i>Oryza sativa</i>) Husk Ash as Fire-Resistant Particle Board | Cielo D. Beltran | Leianne Mae P. De Guzman | QNHS |
| Bambury: Utilizing Bamboo And Abaca Rope For Upright Drill Mechanisms As An Alternative Seedling Tray For Seed Sowing And Establishment Of Narra And Kalumpit | Arciaga, Leon Kirby M. | | Quezon Science HS |

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|------|---|--|---------------------------------|-------------------|
| | TaCS: The Utilization of Taro and Cassava Starch in the Production of Eco-Friendly Plastics for the Packaging of Non-Liquid Materials | Dion Amiel S. Bautista | | Recto MNHS |
| | Harnessing the Potential of Onion (<i>Allium cepa</i>) Skin-Derived Anthocyanin as a Natural Photoinitiator for Dye-Sensitized Solar Cells | Iranzo, Gillian B. | John Michael A. Castillo | Recto MNHS |
| | Luminaqua: Developing A Saltwater Lamp Using Electrochemical Cells | Erick R. Sante | Joel R. Arcamo | Talipan NHS |
| TEAM | The Utilization of Dried Saluyot Leaves (<i>Corchorus Olitorius</i> Linn) Tea as a Nutritious Milkshake | Jyhza Ma. Grace P. Villano Krizzie Michaella P. Galon Alliah Irish Felisco | | Alabat Island NHS |
| | Utilization of Cassava-Based Polysaccharides as Natural Flocculants for Turbidity Reduction in Household Water Supply | Lee Vincent N. Reazo Lovely Anne N. Endino Jhannah Nichole A. Novilla | | Alabat Island NHS |
| | Bio-Based Fire-Retardant Coating from Boric Acid Powder with Eggshell Powder and Cassava (<i>Manihot esculenta</i>) Binder Mixture | Franca, Jan Benedik E. Meliton, Dana Sophia M. Montanez, Jiro Kesler V. | Aiko Ricca V. Manaog-Villamayor | DMDPNHS |
| | MRP Sealant: Mussel shell (<i>Perna viridis</i>), Rice glue (<i>Oryza sativa</i>) and Pili resin (<i>Canarium ovatum</i>) as an Eco-friendly Boat sealant | Santander, Andrei R. Sitazate, Kyl C. Mangaba, Gemson A. | Ma. Camille Anne M. Guevarra | Atimonan NCHS |

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|---|---|------------------------------|---------------|
| Rice (<i>Oryza sativa</i>) Hull and Rice Straw Pulp as an Alternative Eco-Friendly Egg Trays | Kimmy Pauline Alva Chloe Yzabelle N. Divina Hershey Andrea B. Ortiz | Ma. Camille Anne M. Guevarra | Atimonan NCHS |
| Calamansi (<i>Citrus x microcarpa</i>) and Gardenia (<i>Gardenia jasminoides</i>) Leaves Extract as an Eco-Friendly Metal Rust Removal Agent | Gamboa Adrian M. Escanilla, Aerial Bernice Inoue L. Laude, Isabella Thea A. | Ma. Camille Anne M. Guevarra | Atimonan NCHS |
| Carbonized rice husk (<i>Oryza sativa</i>), Dried Loofah (<i>Luffa aegyptica</i>), and Moringa seeds (<i>Moringa Oleifera</i>) as water filter | Zaivhan A. Lavidés Joseah Eisha Linney R. Marasigan Kathryn Alyssa N. Silva | Ma. Camille Anne M. Guevarra | Atimonan NCHS |
| Effectiveness of 2CPA Lemongrass–Oregano Mosquito Coils on Mosquito Mortality | De Castro, Kyla C. De Jesus, Kristinelli D. | Kathrine K. Belda | Dagatan NHS |
| “Sustainable Textile Alternatives: Assessing the Viability of Passion Fruit (<i>Passiflora edulis f. flavicarpa</i>) Bio-Leather” | De Castro, Kylene C. Navarette, Joyce Lindel P. | Kathrine K. Belda | Dagatan NHS |
| Effectiveness of Banana Peel (<i>Musa acuminata balbisiana</i>) and Aloe vera (<i>Aloe barbadensis miller</i>) Extract as a deodorant for whitening underarms | Angelo Matthew A. Asilo Gian Carlo B. Baes Joachim Alphonsus D. Geluz | Roderick L. Litana | Gumaca NHS |
| Viability of <i>Alpinia Purpurata</i> (Red Ginger) and <i>Zea mays L.</i> (Maize) as Environmental Bio-indicators: An Eco-based Approach to | Zabala, Helena Andrei V. Guia, Rhianna Mae S. Flandez, Franchesca Therese V. | Angelo C. Angeles | Lopez NCHS |

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| | Monitoring Air Pollution | | | |
| | RELEAF System: Fruit and Vegetable Waste Microbial Fuel Cell Boosted by Coconut Shell Biochar and Calcined Eggshell for Self-Sustaining Leaf Crop Farming | Mary Kaye V. Morano Kyle Allen Gabriel V. Reyes Edriel Juben P. Vilar | Gideon Louis T. Trañas | Lopez NCHS |
| | “Utilization of Hibiscus rosa-sinensis (Gumamela) Extract as a Raw Material for Bioplastic Production” | Mark Cydrick N. Navarez Jasella Rhian T. Lim Katherine G. Macatangay | Gideon Louis T. Trañas | Lopez NCHS |
| | Shellcrete: Utilization of Waste Egg Shells (Gallus gallus domesticus) and Asian Green Mussel Shells (Perna viridis) as Partial Cement along with Terracotta and Glass Particles as Aggregate in an Alternative Concrete | Argante, Rianna Normelia P. Indrinal, Michael Jacob B. Perion, Clark Samuel M. | Angelo C. Angeles | Lopez NCHS |
| | Cocoficem: Acoustic Fiber Cement Board Utilizing Cocos Nuciferaash (Coconut Shell Ash), High-Density Polyethylene Plastic, And Hydrogen Peroxide Treatment | Mohamad Marham P. Sultan Tyron James A. Gamalinda Bryan David A. Surio | Gideon Louis T. Trañas | Lopez NCHS |
| | Potential Of Nata De Coco (Komagataibacter Xylinus) As Natural Casing For Lucban Native Sausage (Langgonisa) | Nelson O. Abilay Jr Daime Henrick D. Dajao John Aaro B. Abuel | Grace Joy A. Salumbides | Lucban (PSLIS) |
| | Pew Board: Paper Waste, Eggshell, And Wood Waste | Bianca Lheanne A. Galeos Chrisha Meirel P. Maledo | Shiela D. Oblea | Lucban (PSLIS) |

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| | As Components For The Development Of Particleboard | Franky Renz G. Oblefias | | |
| | Fortified Mortar Paste Development With Ashes Of Rice Husk (<i>Oryza Sativa L.</i>) And Bamboo Leaves (<i>Bambusa Vulgaris</i>) As Alternative Fine Aggregate | Ayohnie Zhey L. Rodriguez Marinell C. Veluya Roah Zane B. Juan | Shiela D. Oblea | Lucban (PSLIS) |
| | Assessing Ionic Strength's Influence in Optimizing Copper Adsorption onto Mango Peel Biochar in Iyam River in Lucena City, Quezon Province | Abuan, Bethany M. Holgado, Chriscel B. Llanera, Princess Zyrien V. | Luningning E. De Villa | QNHS |
| | Coconut (<i>Cocos nucifera</i>) Husk Briquettes with Beeswax Admixture | Jin Kyron M. Alonzo Jancsi Reuven M. Jao Marcus Yuan C. Paglicawan | Leianne Mae P. De Guzman | QNHS |
| | Physico-Mechanical Properties of Bio-Composite Particle Board Out of Coconut (<i>Cocos nucifera</i>) Husks and Coffee (<i>Coffea arabica</i>) Chaff as Thermal and Acoustic Insulator Material | Alexandra M. Labaguies Czarina Erin B. Roson Patrice Ann Louise E. Salayo | Leianne Mae P. De Guzman | QNHS |
| | Pandan Leaf Fiber (<i>Pandanus Simplex Merr.</i>) And Nipa Palm Fiber (<i>Nypa Fruticans</i>) As Concrete Hollow Block (Chb) Admixtures | De Vera, Lia Marie A. Simeon, Janine Margarette A. Turallo, Anaia C. | | Quezon Science HS |
| | Alternative Asphyxiator (2A's): Utilization of Pomelo (<i>Citrus grandis</i>) Peels Broth and Powdered Chicken (<i>Gallus gallus</i>) Bones | Aquino, Prince Carlos C. Gayapa, Thea Jullianna Lorane M. Tamayo, Khyle Andrew D. | John Michael A. Castillo | Recto MNHS |

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| as Foam Fire Extinguisher | | | |
| Refrigerator Waste Heat to Energy Generator for Electricity Needs (REGEN): Sustainable Thermoelectric System for Powering Home Appliances | Gaviño, Iya Yssabel S. Patalay, Precious Nicole P. | John Michael A. Castillo | Recto MNHS |
| Starchell: The Utilization of Coconut (Cocos nucifera) Shells and Corn (Zea mays) Starch in the Development of Eco-friendly Glue | Aliyah May C. De Leon Stephanie D. Gadayan | | Recto MNHS |
| TaSCa: A Comparative Analysis of Taro (Colocasia esculenta), Sweet Potato (Ipomoea batatas), and Cassava (Manihot esculenta) as Fibrous Stems Combined with Used Paper as Sustainable Alternatives for Paper Bag | Audry Mae V. Banayo Elijah Marie B. Gusi Ma. Maxine Claire F. Sablayan | | Recto MNHS |
| BANQUETTES: COMPARATIVE ANALYSIS OF THE COMPOSITION OF CHARCOAL BRIQUETTES PRODUCED FROM SABA BANANA (Musa acuminata × balbisiana) AND LUCBAN (Citrus maxima) PEELS | Francis Jonel V. Ibigin Justine Raine S. Laylo Asyannah Sola Capisanan | | Recto MNHS |
| CHARIUM: Onion Peels (Allium cepa) and Charcoal as an | Moster, Kyiemee M. Pacia, Zaijean Yazhi M. | | Recto MNHS |

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| | Alternative Material for Synthetic Ink | Villanueva, Stephanie C. | | |
| | ALOBEEBA: The Utilization of Aloe Vera (Aloe barbadensis), Banana Peels (Musa spp.), Beeswax, and Orange Peels (Citrus sinensis) as an Alternative Key Ingredients in Creating an Organic Shoe Polish | Rey Anne A. Atienza Aaliyah Mikhaela A. Demaapi Meagan Shane R. Escalona | | Recto MNHS |

RESEARCH CONGRESS – MATHEMATICAL & COMPUTATIONAL SCIENCES

| CATEGORY | RESEARCH TITLE | NAME OF RESEARCHERS(S) | COACH | SCHOOL |
|------------|---|---|----------------------|-------------------|
| INDIVIDUAL | Enhancing Alabat's Fishing Industry through Statistical Forecasting Model | Lemuel S. Dimayuga | | Alabat Island NHS |
| | A Mathematical Framework and Ideal Equation for Predicting Water Height Dynamics Under Environmental Influences | Arik Jehan Mendoza | Nico O. Buenaventura | Gumaca NHS |
| | Cocomath: Coconut Optimization Through Computational Modeling And Analytical Techniques | Elaizarose Q. Golfo | | Quezon Science HS |
| TEAM | Yield Prediction Model for Coconut Production Using Regression Analysis | Jayson Alverth M. Belazon Santina Raizzell G. Camara Yuan Danielle P. Malabunga | | Alabat Island NHS |
| | Tal-E (Talipeño- Math Made Easy): | Lira M. Gasis John David R. Jus | Joel R. Arcamo | Talipan NHS |

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| | Development of a Talipan National High School Specialized AI Engine Addressing Challenges on General Mathematics | Gerundio A. Real IV | | |
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RESEARCH CONGRESS – ROBOTICS & INTELLIGENT MACHINES

| CATEGORY | RESEARCH TITLE | NAME OF RESEARCHERS(S) | COACH | SCHOOL |
|------------|--|--|---------------------------|-------------------|
| INDIVIDUAL | Evaluation of an Arduino-Based Solar-Powered Robot for Crop Seeding and Watering with Varying Seeding Rates and Speeds: Investigating Accuracy, Efficiency, on farmers | Nor-ayin T. Pantao | Roderick L. Litana | Gumaca NHS |
| | The Plausibility Investigation of Solar-Powered Arduino-based Lawn Mower (S.P.A.L.M.) as an Eco-friendly Alternative to Gas-powered Models | Mumiah Reiyel V. Garcia | | Recto MNHS |
| | aCSSist: Developing an Interactive Simulator in Learning CSS for Talipan National High School | Darryl M. Nilo | Joel Arcamo | Talipan NHS |
| TEAM | AutoVac: Automated Self-Cleaning Vacuum | Jhan Aren T. Balino Renz Anthony L. SanJose | Camillie Anne M. Guevarra | Atimonan NCHS |
| | Alabat's Aqua Man: Assessing The Potential of Soil Moisture Extraction Technology to Mitigate Water Shortage In Alabat, Quezon Province | Alexis Isabelle B. Cabangon Reynante P. Martinez Jr, Chino D. Oliveros | | Alabat Island NHS |

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| Development of the HRD (Humus Robot Dispenser): Using an IR (Infrared) Sensor to Detect a White Patch for Efficient Dispensing of Humus to Plants | Elinah Angeli Z. Caralian Althea Dominique Anne C. Soriano | Roderick L. Litana | Gumaca NHS |
| Robo-cur: Development of a Smart Arduino-driven Canine-inspired Custodian Robot Equipped with ESP32s-CAM for an Accurate Detection in Fortifying Domestic Monitoring and Protection of Vacant Homes | Janela D. Dapito Alnyna Leya F. Hernandez | Roderick L. Litana | Gumaca NHS |
| PRISMA: Precision Robotic Integrated System for Multifunctional Agri-Aquaculture Applications | Alair Martin P. Gutierrez Euoia Jald Bless P. Tabien Allyssa Feliz A. Valencia | Gideon Louis T. Trañas | Lopez NCHS |
| IoT-Based Automated Soil Monitoring System Integrated in Arduino with GSM Module for Agricultural use | Gold Akyssha Ambas Martina Faith An, Elijah William Magbanlac | Leianne Mae P. De Guzman | Quezon NHS |
| The Utilization of Remote Control (RC) Car: "To Retrieve and Deliver" (TRaD) for Hospitals and Polyclinics | Aiyana Nicole M. Getuaban Lovely Joy B. Liwanag | | Recto MNHS |
| Fire Locator and Alert Response Equipment (FLARE): An Advanced System for Real-time Fire Detection with Enhanced Auto Door Lock System | Tristan Bryson M. Mangelit Maria Angela C. Mabuting | John Michael A. Castillo | Recto MNHS |

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| | | Cazandra Rose M. Vargas | | |
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RESEARCH CONGRESS – NATIONAL SCIENCE INNOVATION EXPO

| CATEGORY | RESEARCH TITLE | NAME OF RESEARCHERS(S) | COACH | SCHOOL |
|------------|--|----------------------------|------------------------------|-----------------------|
| INDIVIDUAL | CARS: Car Alarm Reawakening System | Erica Mae M. Tesorero | Ma. Camille Anne M. Guevarra | Atimonan NCHS |
| | Waste-to-Biogas Conversion Systems (WTBCS): A Sustainable Solution for Rural Waste Management | Kim Jazmine C. Danao | John Rafael H. Laureles | DMDPNHS |
| | Sound-Sensing Assistive Strap Device to Detect Approaching Vehicles for the Hearing Impaired: Enhancing Awareness Through Real-Time Vibration Alerts | Miguel Santino E. Loyola | Roderick L. Litana | Gumaca NHS |
| | Arduguino: An LCD-Based Temperature Detector for Canine Body Temperature Through Sensor Accuracy Testing | Xandria T. Ignacio | Roderick L. Litana | Gumaca NHS |
| | “KNOWck KNOWck: A Device That Detects Faculty Presence and Availability” | Laurent Angel L. Balatayo | Gideon Louis T. Trañas | Lopez NCHS |
| | Real-time Integrated Surveillance for Environmental Heat (R.I.S.E.) | Mardrienne Jaze F. Montero | Angelo C. Angeles | Lopez NCHS |
| | Design and evaluation of an arduino-based cleaning and Sanitizing machine for reusing glass bottles | Darren Jay B. Rosales | Cris Edison U. Villanueva | Lutucan Integrated HS |

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| | AgriTom: Automated Agricultural Tomato Plant (Solanum lycopersicum) Sensor with Real-time Monitoring through Photo Classification with Raspberry Pi 4 Model B | Lorma Trish Z. Sio | Leianne Mae P. De Guzman | QNHS |
| | Autoclirr: Solar-powered Irrigation Canal Blockage Cleaner | Rizha Ariella Martinez | Joel Arcamo | Talipan NHS |
| | Iwas: development of an arduino-based flood alert system for Community risk reduction | Almira Fate B. Lusanta | Joel Arcamo | Talipan NHS |
| | Power-Integrated Solar Emergency Lighting Systems with Autonomous Photoelectric Smoke and Heat Detectors | Rebanal, Airene Claire D. | Gideon Louis T. Trañas | Lopez NCHS |
| TEAM | The Green Fix: A DC-Motorized Canal Waste Collector With Eco-Friendly Filtration | Riana Ysabel J. Camota Kristine Andriana T. Escudero Gabriel Luis B. Nazareno Khat Andrea G. Palicpic Princes Rea E. Rollan | Shielden Mariz D. Sario | DMDPNHS |
| | See the Fee with RGB: Development of an Arduino and TCS34725 Color Sensor-Based Assistive Device for Accurate Philippine Banknote Recognition with Audio Feedback for the Visually Impaired | Mary Jamer R. Calibot Jillian Clarisse S. Fernandez | Roderick L. Litana | Gumaca NHS |
| | Automated Mosquito Deathtrap Machine (AMDM) | Yowa Czaren M. Flores | Angelo C. Angeles | Lopez NCHS |

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| | | Eriko Roi G. Oller | | |
| | | Kheiara Zairyll Villate, | | |
| V.E.N.D.O: Vending for Environmental Neutrality and Device Optimization | | Pinky Joy B. Dañas Rhiana G. Marciano Djoaima Fionnah Ara Kirei L. Jimenez | Angelo C. Angeles | Lopez NCHS |
| Solar Energy-Driven Arduino-Based Paddy Rice Distributor For Direct-Seeded Rice Planting | | Jane Avegele G. De La Cruz Carl France I. de Guzman Prince Arjane D. Parzuelo, | Cris Edison U. Villanueva | Lutucan Integrated HS |
| Efficiency assessment of a food waste shredding Machine for biogas production | | Marie Antonette S. Anahaw Ashly Claudet F. Grafilo | Cris Edison U. Villanueva | Lutucan Integrated HS |
| | | Harvey P. Oborza | | |
| Adoptive Response for Containment System (ARCS): An Active Flood Prevention System | | Paul Martin Dhar Brylle Kendrick G. Quevedo John Benedict M. Tumaliuan | | PSLIS |
| SOLAR-POWERED WATER ENTRANCE AND EXIT PATHWAY (SWEEP): A Canal Cleaning Development For Waterways Management | | Rachelle C. Rana Saicymiere E. Zaide Kaye D. Velasco | | PSLIS |
| AquaGuard: App-Enabled Automated Solar-Powered IoT System for Real-Time Water Quality Monitoring and Smart Feeding in Aquaculture Fish Ponds | | Jhames Rianne G. Razo Kendrex Jairus R. Rodriguez Josh Gabriel A. Simbulan | Luningning De Villa | Luningning De Villa |
| AERONSENSE: Automated Environmental Response | | Rhein Zakurah I. Abuyan | | |

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| | And Optimization System for Efficient Nutrient And Sensor-Based Evaluation In Aeroponics | Calleigh Aubrey S. Achacoso Riva Angeli D. Ulan | | |
| | Aerovor: Developing a Renewable Seed Grader for Small-Scale Farmers | Jenney D. Alarcon John Roi E. Alegre Zyric Renjay C. Tan | Joel R. Arcamo | Talipan NHS |
| | SûrLink: Development of an AI-Powered Anti-Phishing App for Senior High Students of Talipan National High School | Sebastian Daniel Z. Sabio Tyrone James M. Tinamisan Allen Franzen D. Eule | Joel R. Arcamo | Talipan NHS |
| | KRVK AUTOMATICOOOL: Automated Greenhouse as an Innovative Cooling System | Venice Ashley M. Cañafranca Prince Rahman, Kiel Vincent M. Sijera | Joel R. Arcamo | Talipan NHS |
| | SEGRETECH: Introducing An Automatic Waste Segregation System In Talipan National High School | Theo P. Carurucan River T. Derilo Ailah Jane E. Maximo, | Joel R. Arcamo | Talipan NHS |
| | The Feasibility Study of a Smart-Controlled Automated Medicine Box (SCAMB): An Arduino-Based Automated Medication Reminder and Monitoring System Among Elderly People Diagnosed with Chronic Diseases | Aldea C. John Romuel Orfanel V. Niño Rhafael Tedios S. Dominick Joseph | | Recto MNHS |

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FORMAT TO BE USED IN THE SUBMISSION OF FOLDERS AND MANUSCRIPTS

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| PS – I - (name of school) for Life Science Individual | BLUE | |
| PS – T - (name of school) for Life Science Team | ORANGE | |
| RIM – I - (name of school) for Life Science Individual | PINK | |
| RIM – T - (name of school) for Life Science Team | BROWN | |
| MCS – I - (name of school) for Life Science Individual | RED | |
| MCS – T - (name of school) for Life Science Team | PURPLE | |
| NSIE – I - (name of school) for Life Science Individual | WHITE | |
| NSIE – T - (name of school) for Life Science Team | WHITE | |

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Enclosure No. 4 to DM No. 959, s. 2025

Additional Technical Working Groups:

- | | |
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| 1. Russel T. Soltura | -Quezon Science High School |
| 2. Gemma Rose R. Bernardo | -Quezon Science High School |
| 3. Noel D. Deveza | -Paaralang Sekundarya ng Lucban Integrated School |
| 4. Shiela D. Oblea | -Paaralang Sekundarya ng Lucban Integrated School |
| 5. Fides Althea V. Claridades | -Paaralang Sekundarya ng Lucban Integrated School |
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