



CLMD-RM-2025-818

Republic of the Philippines
Department of Education
REGION IV-A CALABARZON

28 October 2025

Regional Memorandum
No. 818 s. 2025

**QUALIFIED RESEARCH PAPERS FOR THE 2025 REGIONAL
SCIENCE AND TECHNOLOGY FAIR (RSTF)**

To **Schools Division Superintendents**

1. Relative to Regional Memorandum No. 673 s. 2025 titled "2025 Regional Science and Technology Fair (RSTF)," this Office through the Curriculum Learning and Management Division (CLMD) announces the qualified research papers for this event which will be held on November 4 to 6, 2025 at Santa Cruz Central Elementary School, Sta. Cruz, Laguna.
2. Qualifiers are expected to bring at least 3 printed copies of their original Tuklas Research and Innovation Expo manuscripts together with the actual output which will be used for the project's actual validation, showcasing, and screening of Judges. A project display board is also expected from each qualified entry based on the guidelines provided from the First Edition of the School, Division, Regional, and National Science and Technology Fair Guidebook.
3. Enclosed are the following for reference:
 - a. Enclosure No. 1: Regional Qualifiers for Tuklas Life Science Category
 - b. Enclosure No. 2: Regional Qualifiers for Tuklas Physical Science Category
 - c. Enclosure No. 3: Regional Qualifiers for Tuklas Mathematics and Computational Science Category
 - d. Enclosure No. 4: Regional Qualifiers for Tuklas Robotics and Intelligent Machines Category
 - e. Enclosure No. 5: Regional Qualifiers for Science Innovation Expo
4. For questions and clarifications, please contact **PAUL GENCE L. OCAMPO**, Education Program Supervisor at paul.ocampo@deped.gov.ph or the Chief of the Curriculum and Learning Management Division (CLMD), **VIERNALYN M. NAMA** at (02) 647-7487 loc. 420 or via email @ clmd.calabarzon@deped.gov.ph.
5. Immediate dissemination of this Memorandum is desired.


ATTY. ALBERTO T. ESCOBARTE, CESO II
Regional Director

02/ROC



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Certificate No. PHP QMS
22 93 0085

Enclosure 1: Regional Qualifiers for Tuklas Life Science Category**Individual Category**

SDO	PROJECT TITLE	RESEARCHER
ANTIPOLO	Assessing The Physical Properties of Corn Husk (Zea Mays) As an Alternative Source of Textile	Aika Jhiell S. Oclarit
BATANGAS PROVINCE	Growth, Yield, and Toxicological Assessment of White Oyster Mushroom (Pleurotus ostreatus) Cultivated on Ink-Contaminated Paper Waste via Brine Shrimp Lethality Assay	Rayael G. Medina
CABUYAO CITY	Cha-B: Charcoal Briquettes from Kangkong (Ipomoea aquatica) Stems and Saba (Musa acuminata x Musa balbisiana) Fruit Peels as Filtration Agent for Iron in Preventing Bacterial Growth in Water	Maria Venice C. Blanche
CALACA CITY	Bioluminescent Papaya: Engineered Gene-Based System for Early Detection Against Papaya Ringspot Virus (PRSV) in Papaya (Carica Papaya)	Matthew Emmanuel C. Villanueva
CALAMBA CITY	Comprehensive Analysis of Phytochemicals, Antimicrobial, and Antifungal Properties of Bagawak Morado (Clerodendrum quadriloculare) Leaves	Ryza D. Alcaide
CAVITE CITY	MOPLEE'SCLM:Malunggay(Moringaoleifera)Leave sandOysterPlant (Tradescantiaspathacea)LeavesExtracttoExtendPost-harvestshelflifeofCarabao Mango(MangiferaindicaL.)	Keith Jilianne DR. Del Rosario
CAVITE PROVINCE	Flavonoid Screening and Molecular Docking of Quercetin from Ipomoea batatas L. Leaves as a Potential Pneumolysin Inhibitor in Streptococcus pneumoniae	Loreto, Abby Gail M.
GENERAL TRIAS CITY	Molluscicidal Activity of Santol (Sandoricum koetjape) Leaves Extract against Golden Apple Snail (Pomacea canaliculata): Dip Bioassay and Field Simulation	Yaneeza Jade P. Sacro
LUCENA CITY	Project LAMBAT: Locally Available Materials-Based Biodegradable Alternative Technology Using Coconut Fibers and Vesicularia montagnei Mesh for Eco-Filtration and Biodegradation in Irrigation Canals	Anica Joyce T. Amboy
QUEZON PROVINCE	Physiological and Morphological Responses of Escherichia coli ATCC 25922 to Simulated Microgravity Using an Arduino-based 2 Dimensional Clinostat	Kyle Mejin L. Valles
SAN PABLO CITY	Susceptibility of Onion Armyworms (Spodoptera exigua) AGAINST Metarhizium rileyi AND Spodoptera exigua Nucleopolyhedrovirus: A Synergism of Fungal and Viral Entomopathogens	Angel Marie B. Coronado
STO. TOMAS CITY	Coconut (Cocos nucifera) Coir, Kapok Cotton (Ceiba pentandra), and Corn (Zea mays) Husks for Floodwater Redirection: A Green Flood Control (FLO-CON) Prototype	Shaira Eunice M. Tinio

Team Category

SDO	PROJECT TITLE	RESEARCHERS
ANTIPOLO	Formulation and Development of LONe (Lemongrass, Oregano, and Neem) Extracts as a Natural Mosquito Repellent for Humidifier Use	Eryne Wynona B. Dioquino, Lucia Marcel T. Alfonso, Christian Joseph M. Detoyato
BACOR CITY	Comparative Analysis of Microplastic Content in <i>Sardinella gibbosa</i> and <i>Sardinella fimbriata</i> from Different Fishing Grounds along Manila Bay, Philippines	Brizbane M. Pino, Gian O. Oliva, Xena Lee C. Organista
BATANGAS CITY	ChromatoFilm: BANANA (<i>Musa paradisiaca</i>) Bract Extract Based Bio-Indicator Hydrogel Film for Extract Based Bio-Indicator Hydrogel Film for pH Detection	Ryan Jr. R. Lopez, Gayle Giada T. Fajutag, Charles Stephen S. Montejo
BATANGAS PROVINCE	Microplastic Contamination in the Gastrointestinal Tract and Muscles Tissue of Cage-Cultured Nile Tilapia (<i>Oreochromis niloticus</i>) in the West of Taal Lake, Batangas, Philippines	Alexa Jhoanne Brosoto, Gracedenisse D. Cueto, Chloe Margarette M. Enriquez
LAGUNA	Formulation of Methanolic Guava (<i>Psidium guajava</i>) Leaf Extract-Infused Water Purification Tablet for <i>Escherichia coli</i> Treatment	Lesly Anne O. Alvarado, Athena Nicole T. Gerella, Eunice L. Villanueva
LUCENA CITY	BioVera: A Seawater Soluble PVA-Aloe Vera Bioplastic Bag	Zeth Dominic Q. Lacerna, Kate Angel Eugenie C. Caronongan Angelika V. Llaneta
QUEZON PROVINCE	Phytochemical Analysis and Inhibitory Activity of Spherified Reishi Mushroom (<i>Ganoderma lucidum</i>) and Makahiya (<i>Mimosa pudica</i>) Leaves Extract Against the Physiological Development of <i>Aedes aegypti</i>	Emmanuelette Danielle Lairen V. de los Santos, Riley A. Carandang, Adrian Uzziah R. Tayao
SAN PEDRO CITY	In Silico and Phytochemical Analysis of Tawa-tawa (<i>Euphorbia hirta</i>) Stem Flavonoids as Potential Inhibitors of TNF- α protein in Rheumatoid Arthritis	Marian Joy A. Eranista, Ma. Nina Therese P. Jaime, Allyssa Yvette P. Lanete
STA. ROSA CITY	Water Hyacinth (<i>Eichhornia crassipes</i>) Leaves Extract as a Ripening Agent for Carabao Mango (<i>Mangifera indica</i> L. cv. Carabao)	Justine Rose A. Eguia, Gian Balmes
STO. TOMAS CITY	AlgaLeaf: Evaluating the Potential of <i>Chlorella vulgaris</i> as an Alternative to Terrestrial Plants in Carbon Dioxide Sequestration and Oxygen Production for Future Eco-Innovative Integration	Kyle Justin P. Buates, Maverick E. Dela Cruz, Patrick Earl O. Maulion
TANAUAN CITY	Antioxidant and Anti-inflammatory Activity of Green Synthesized Silver Nanoparticles from Propolis Extract of Stingless Bees (<i>tetragonula</i> s.p.) in Early Prevention of Atherosclerosis: Targeting Hyperlipidemia via in Silico Molecular Docking, Admet Profiling and Phytochemical Assays	Anaiah Brielle D. Perez, Athea Anika E Landicho, Cedric Anthony D. Sona
TAYABAS CITY	Sodium Alginate and Calcium Chloride as Biofilm to Prolong Post-Harvest Shelf life of mangosteen (<i>Garcinia mangostana</i>)	Krishna F. Andaya, Paul Jhondel D. Bacera, Alisha Mae A. Bueno

Enclosure No. 2: Regional Qualifiers for Tuklas Physical Science Category**Individual Category**

SDO	PROJECT TITLE	RESEARCHER
BACOR CITY	Concrete Optimization for Residential Engineering (CORE): Mechanical Properties of Tongue-and-Groove Foam Concrete with Expanded Perlite and Waste Pyrogenic Silica (Silica Fume) Admixtures	Gretel T. Balerite
BATANGAS PROVINCE	Carbon Nanotubes Derived from Carica papaya (Papaya) Dried Leaves for Advanced Energy Storage	Rexel C. Barrameda
BINAN CITY	Utilizing Sugarcane Bagasse as an Evaporative Cooling Pad for Improved Cooling System in Sustainable Housing	Aryll Angela S. Leus
CALAMBA CITY	CLEAN: Crop Luminescence for Energy and Nature in Innovative Solar Windows	Shanleymai C. Maunahan
CAVITE PROVINCE	Project ExhALE: Exhaust Adsorbents with Localized Eco-materials	Chua, Ericka Dane A.
IMUS CITY	EcoCell: Utilization of Coconut Shell-derived Activated Carbon and Recycled Brass Wire as Potential Electrodes for Galvanic Cell	AJ Maye A. Miralles
LIPA CITY	HELIX: A Novel in-situ Automated Responsive Spray System for Controlled Release of citrus Peel Essential Oils in the Sustainable Management of Cacao Mirid Bug in Cacao Plantations	NyaMariz S. Talento
QUEZON PROVINCE	Powdered Duhat bark and Bignay leaves as a biostimulant of E.coli for microplastic biodegradation in soil	John Paul L. Beltran
RIZAL	AI-Assisted Glucose Control Predictions via Retinopathy Recognition for Diabetic Patients	Claire Gem G. Campillos
SAN PABLO CITY	FLARE: Synthesis and Characterization of Functionalized Filter Paper Grafted with Polyaniline (PAni) Using In Situ Polymerization for Erasable Conductive Materials in Electronics	Jane Clarese M. Flores

Team Category

SDO	PROJECT TITLE	RESEARCHERS
BACOR CITY	ConcreTibay: Development and Evaluation of Mechanical Strength of Lightweight Foam Concrete (LFC) Using Musa spp. (Banana) Pseudostem, Calcined Kaolin, and Polyvinyl Alcohol Binder	Trystan Aeris T. Abagat, Joseph Erick C. Romasanta, Romina Ishi Sanchez
BATANGAS PROVINCE	A Hybrid Solar-Wind System for Continuous and Real-time Coastal Water Quality Monitoring	Jhenela Mae M. Dalangin , Ashley Mae M. Clarete, John Patrick A. Evangelista
BINAN CITY	Potential Use of Talahib Grass as an Additive Component in Producing Biogas	
CAVITE CITY	CACTUS: Commercial Agricultural Cultivation Using Technological Upgrade Systems- Advancing Vertical Farming with Automated Solar Pumps and Soil Sensors	Akiah Rhaine P. Ramos, Greighcko D. Rodrin, Ayianah Payongayong
GENERAL TRIAS CITY	Piña-Galing: Hemostatic Efficiency of Pineapple-Based Gel Using Reinforced Enzymes in Wound Dressing Application	Serenity Faith T. Bautista, Marwin Jay G. Manalo, Azriel Anne Franchesca P. Villa
IMUS CITY	TELA-TUBE FUEL: Transesterification using bioEthanol from Lignocellulosic Apparel and Tuba-tuba Seed Oil for Utilization in Biodiesel as an Alternative Fuel	Mharianne A. Policarpio, Austine Rose A. Ubaldo, Kentrhandel John R. Velasco
LUCENA CITY	PomEx: Vehicle Exhaust Filter using Pomelo-Peel (Citrus maxima) Derived Materials for Carbon Emission Reduction	Cedric A. Rafa
QUEZON PROVINCE	Effectiveness of Corn Cob- and Corn husk-derived biochar as biosorbent for poultry wastewater treatment	James Rigor L. Cariño, Amira Jem V. Redublo, Alexander Jacob P. Villapando
SAN PABLO CITY	Aurora: Synthesis And Characterization of Zinc Oxide-Polyaniline (ZnO-Pani) Heterojunction Diode on Graphite Electrode with Potential Application as Uv-Responsive Photodiode	Erra Drew B. Abrenica, Ralph Asser H. Gapunuan, Charisse Jaqlyne Mae L. Valencia
STA. ROSA CITY	FishTic: TILAPIA (Oreochromis niloticus) Fish Bones as a Source of Hydroxyapatite for Low-Density Polyethylene Degradationra) Activated Carbon	Zyrah Mae M. Ragel, Samantha Vienn A. Desembrana, Daron A. Tolentino

Enclosure No. 3. Regional Qualifiers for Tuklas Mathematics and Computational Science Category

Individual Category

SDO	PROJECT TITLE	RESEARCHER
BACOR CITY	Structure-Based Computational Analysis of Amyrins from Santan (<i>Ixora coccinea</i>) Targeting Multiple Metabolic Enzymes Associated with Antimicrobial Resistance	Blaire Fritz C. Buere
BATANGAS CITY	Biya-Hero: Algorithmic Integration of Radio-Frequency Identification (RFID) Payment, Global Positioning System (GPS) Localization, and Mobile Interface: A Computational Approach to Tricycle Smart Services in Batangas City	Kate Eilasor L. Aguda
CALAMBA CITY	PEDIC: Utilizing Linear Programming in Optimizing Pest and Disease Control Model in Rice Crop Management	Wesley Aviv M. Macatangay
CAVITE PROVINCE	WATTerWave: Linear Wave Model in Simulating Electromagnetic Induction-Based Energy Generation in Point Absorber Wave Energy Converters (PAWECs)	Santos, Sanria Gabrielle A.
DASMARINAS CITY	Hybrid Computational Framework for Spatio-Temporal Microplastic Fate Modeling and Coastal Hotspot Assessment in Bacoar Bay	Faith Mendoza
GENERAL TRIAS CITY	Modified Rice Farming Schedule using SARIMA to Increase Crop Yield In Pangasinan	Justin Astudillo
IMUS CITY	Gridlocked: Minute-Level Traffic Flow and Calibrated Density Forecasting via Monte Carlo Simulation with Uncertainty Bands at Bucandala Intersection	Maroo R. Espinosa
LIPA CITY	Rootify: A Derivative-Free Cubic Method for N-th Root Approximation with Applications to Earthquake-Resistant Design	Stephen M. Dimatatac
LUCENA CITY	Computational Analysis of Tomato (<i>Solanum Lycopersicum</i>) Ripeness Using MATLAB-Based CNN for Application in Local Agriculture	Belle Vienne A. Acuavera, Bryce Androu C. Martinez, John Joseph U. Santos
QUEZON PROVINCE	Computational Fluid Dynamics Analysis of Fluid Flow Through Three-Dimensional Porous Fractals: Menger Sponge and Sierpinski Tetrahedron	Jonas Romasanta
RIZAL	WIF-DGP: Probabilistic Spatiotemporal Forecasting of Philippine Rice Pest Outbreaks via Wavelet-Based Image Fusion and Deep Gaussian Processes	Justin Mark G. Gonzales
SAN PABLO CITY	"Luminarice: Comparative Multivariate Computational Modeling of F1 Hybrid Rice (<i>oryza sativa</i> l.) Yields Leveraging Quantitative Phenotypic Parental Trait Profiles"	Bryce Lebron V. Dimaano
SAN PEDRO CITY	Forecasting Pollution Spread in Laguna de Bay via In-Silico Modeling with Sentinel-2 and Diffusion Equations	Miguel Inigo E. Alonzo
STA. ROSA CITY	Arcapova as A Digital Game-Based Teaching Tool on Factoring Quadratic Equations and Expressions in Grade 8 Math	Euan Gabriel E. Canlas
TANAUAN CITY	Integrative Lipidomic-Driven Metabolomics Analysis of Survival Rates and Predictive Outcomes of Type 2 Diabetes Mellitus (T2dm) Via Deep Learning Using Long Short-Term Memory (Lstm) + Dense Multi-Layer Perceptron (MLP) And Cox Proportional Hazard Regression Networks	Mary Isabelle M. Ibanez
TAYABAS CITY	PASAFAIR: Passenger Allocation System and Fare Assessment in a Application Using Dijkstra's Algorithm for Intelligent Routing in Tayabas City	Daniel Mico V. Odasco

Team Category

SDO	PROJECT TITLE	RESEARCHERS
BATANGAS CITY	AIRIS+: Mathematical Prediction Models of Air Quality Analysis for Volcanic Environments of Taal Volcano with a Real-Time Air Quality Monitoring System utilizing Computational Fluid Dynamics	Jemimah C. De Castro, Dhayanah I. Lopez, Kierzten Joezaine C. Villar
BINAN CITY	P O'clock: An Automatic Class Scheduling System Powered by Pigeonhole and Pareto Principles	Rhylee Amiel B. Iran, Hannah Kim M. Pamorada, Colleen L. Salting
CABUYAO CITY	AGILA: An Algorithm-based Geospatial Intelligent Lifesaving Apparatus for Rapid Response in Flooded Areas	John Gie Jr. M. Golpo
CALAMBA CITY	Predictive Modeling of Climate Variables and Adaptive Strategies for Optimizing Crop Yield Dynamics: A 5-Year Forecast for CALABARZON	Lianne Mae G. Arambulo, Rendelll A.Elomina, Kobe Noah R. Rocha
CAVITE PROVINCE	PrEP Technology: A Machine Learning System for Multi-Omics Analysis of Human Immunodeficiency Viral Evolution and Drug Resistance Utilizing the Revised SIS-A Model of Cytotoxic T Lymphocyte Response Integrated to CD4+ T-Limited Differential Equations for Optimal Antiretroviral Therapy	Allysa Phoebe A. Digo, Vergel B. Arellano, Ken Harry G. Camingay
DASMARINAS CITY	Predicting Round Behavior and Win-Loss Outcomes in Valorant: An Application of Machine Learning Algorithms to Zero-Sum Decision Strategies	Karl Paulo B. Segundo, Lessandra Fiona Belenzo, Array John Doctor
GENERAL TRIAS CITY	D.R.A.W.I.N.G through GeoMathika: Dynamic Representations using Algorithmic Writing for an Interactive Numerical Geometry Program	Jewel Rose T. Bacquian, Charmaine, Angella S. Faytaren, Guilfred M. Murillo
IMUS CITY	TetraSpira: A Recursive Square Spiral by Diagonal Expansion (RSSDE) — Theorems on Coordinate Modeling and Topological Properties	Snowdane Nhack Y. Maquilan Akiro Jeno L. Crisolo Edrian Gayle M. Pili
LAGUNA	Simulating Flood Hazards and Community Evacuation: An Agent-Based Modeling Approach to Risk and Preparedness	Mcrae B. Galapin, Mark Gabriel C. Esguerra, Audrey Jhane D. Latayan
LIPA CITY	Mitigation of Flood Through Project Poseidon : Powered Optimized System for Energy Integration, Drainage and Orchestrated Nutrification	Sean Jairus A. Zapanta, Lhorraine Jhyien C. Batiao, Alvin Jr. V. Rodelas
RIZAL	A Mathematical Model on Breast-to-Hotspot Temperature Asymmetry and Breast Temperature Variation Through AI-Based Thermography Analysis for Breast Cancer Pre-Screening	Karmella Aureen A. Campo, Dane Gabrielle V. Diaz, Elisha Jaden D. Distor
SAN PABLO CITY	Rehabitat: Smart Computer Vision and Computational Geometry for Angle-Based Automation of Post-Stroke Motor Function Assessment Using Yolov11	Erica Liezl P. Guevarra Cassandra Julian L. Gatchalian Dwane Lloyd K. Garcia
TANAUAN CITY	Integrating Self-Supervised Vision Transformers with Deep Neural Networks as a Diagnostic Tool for Cytomorphology-Based Detection of Acute Myeloid Leukemia (AML) and Prediction Of NPM1 Mutation Status	Alliah Joy M. Lazaro, Arianne Jerami, Gabriel A. Matanguihan L. Maiquis

Enclosure No. 4: Regional Qualifiers for Tuklas Robotics and Intelligent Machines Category

INDIVIDUAL CATEGORY

SDO	PROJECT TITLE	RESEARCHER
ANTIPOLO	IoT-Enabled ESP32 Smoke Detector for Combustible and Non-Combustible Smoke With Real-Time Notifications	Yohann E. Delos Santos
BACOR CITY	NAVICANE: Assistive Navigation Cane with Obstacle Detection for the Visually Impaired	Samantha S. Velizano
BATANGAS CITY	H2OPTIMA: Hydration and Water Optimization Through Proactive Technology for Integrated Monitoring in Astaciculture	Sean Cleo G. Asi
CALAMBA CITY	HYDROINTELLIGUARD: Mechanical Canal Waste Extractor with Ultrasonic Sensor for Waste Amount Detection - Equipped with Inductive Proximity Sensor for Waste Segregation	Carla Khate G. Señoza
CAVITE CITY	HYGIEAID: Rebuilding Healthcare Using Enhanced Artificial Intelligence Bot Partner for Healthcare Workers	Ayeleth Dana D. Molina
CAVITE PROVINCE	V.E.R.A.: Vinegar-Based Egg Removal Automation - A Mobile Robot System Utilizing Machine Learning in Detection and Removal of Pomacea canaliculata (Golden Apple Snail) Eggs Using Wood Vinegar	David Matthew A. Rojas
GENERAL TRIAS CITY	ORCA: Utilizing Arduino-Based Ocean Robots and Green Mussel Shells (Perna viridis) for Ocean Surface-Level Water Alkalinization	Leah Jane G. Gaudiel
IMUS CITY	AERASE: An AI-Integrated Solar-Powered Raspberry Pi IoT System with Night Vision Camera for Smart Dengue Hotspot Detection and Mosquito Eradication	Paul Charles B. Magalong
LIPA CITY	SILIP: Surveillance Invention for Learning Environment Intended Protection	Carl Joshua L. Rubite
QUEZON PROVINCE	AQUA-SMART: Aquaponics and Aquaculture Self-Sustaining Monitoring System with Automated Feeding, Water Quality Control, and Renewable Solar Tracking	Jancis Aaliyah Almarinez
RIZAL	MALAIA: AI-Driven Assistive Tool for Point Of Care Malaria Diagnosis	Mary Angeline C. Marquez
SAN PABLO CITY	LIFEBRIDGE: Development and Evaluation of IoT-Based and Fuzzy Logic Algorithm-Integrated Wearable Platform Using ESP32C3 Microcontroller for Real-Time Patient Stratification and Emergency Triage	Justine Kyle G. Linang
SAN PEDRO CITY	Autonomous Indoor Carbon Monoxide Detection and Source Localization Robot	Ma. Carla Nicole C. Lar
TAYABAS CITY	BLOOM: IoT-Based Real-time School Lavatory Odor Monitoring Software Application	Michaela D. Palad

TEAM CATEGORY

SDO	PROJECT TITLE	RESEARCHERS
BACOR CITY	RoboPatrol: Intelligent Autonomous Robot for Road Surface Monitoring and Geospatial Damage Mapping	Alessandra Nicole B. Guerrero, Khen Cedrick Castro, Todoc, Brennan D.
CABUYAO CITY	COMU-CAN (Cumulative Community Trash Can): An Automated Point-Based Reward System Waste Segregator	John Carlo O. Bolima, Lyndhon Miel P. Mariquina, Aliya Ysabel D. Papa
CAVITE CITY	QU-ROAMER: Quick Underwater Robot Operating for Aquatic Missions, Exploration and Recovery	Jamila Fay C. Espura, Kyle Matthew M. Gaudie, ¹ Nanzel Spettel S. Mejilla
CAVITE PROVINCE	ROBO PLEURO: Pollutant-Locating Enzymatic Unit for Remediation and Optimization - An Autonomous Biohybrid System Using Oyster Mushroom (<i>Pleurotus ostreatus</i>)	Nash Daniel V. Belga, Reynne H. Neo Palustre, Ginrex Cyrus M. Tosco
IMUS CITY	Arduino-Based Automated Hydroponics System with Integrated NVIDIA JETSON-Based Robotic Arm for Crop Planting and Collection	Haiden C. Basbas April Laine S. Jamito Earl Stevenson J. Sanchez
LAGUNA	HYDROPAY: Hydration Yielding Device for Regulated Output and Dual Payment-Activated System Using Microcontrollers and Real-Time Web-Based Profit Tracking	Princess Marvie Andrea B. Blasa, Mcdanielle O. Dagdagan Vince Aeron R. Esquibel
RIZAL	NIYOG: Neutral Identification Yielding Optimal Growth for Drone Spraying and Coconut Tree Disease Intervention	Anya Andrea Theresa P. Boco, Mara Sofia O. Domingo, Hannah Isabelle F. Soriano
SAN PABLO CITY	GTEC AUTOMOS: Design of a Raspberry Pi 4-Powered Autonomous Multi-Sensor System Integrated with Thermal Imaging, Gas Sensing and Air Quality Tracking for Safety Monitoring and Hazard Prevention	Arjemn Joshua R. Garbo Ana Sofia T. Himzon Jhynne Xalve V. Porcioncula
STA. ROSA CITY	SODAPOP: Collector of Surface Oil and Debris an Autonomous Patrolling Operating Robot	Gabriella S. Santiago, Tia A. Chen
TAYABAS CITY	WIVAI: Web-Based Information Verifier Assisted with Artificial Intelligence	Turiano C. De Ramos IV, Kient Jharred S. Obeña, Krisma Beatrice A. Plasuelo

Enclosure No. 5: Regional Qualifiers for Science Innovation Expo**INDIVIDUAL CATEGORY**

SDO	PROJECT TITLE	RESEARCHER
BACOR CITY	Physicomechanical Evaluation of IMPET Particle Board: Utilizing Dried Indian Mango Leaves (<i>Mangifera indica</i>) Recycled PET (Polyethylene terephthalate) Plastic Bottles	Nhabert Audrey S. Barza
BATANGAS PROVINCE	Flood Sense: A Smart Flood Sensor Device and Monitoring Sytem with Buzzer Alarm and SMS Notification Alert	Yvine E. Villavicencio
BINAN CITY	Turbine-Boosted Water Electricity from Storm DrainS (TURBOWEDS)	Ethan Matthew O. Silva
CABUYAO CITY	WAVES – Water Assessment, Verification, and Early-warning System	Luis Sebastian A. Naraga
CALACA CITY	Waste to Waves: Transforming Synthetic Rubber Waste into Sustainable Beach Marker Buoys	Jonah Naomi C. Ilao
CAVITE PROVINCE	Project REALM+: Real-time Evaluation and Analysis of Liquid Containing Microplastics with an Integrated Filtration System	Hannah Nicole B. Carbonel
DASMARINAS CITY	LarvAlert: Smart Sensor & Makeshift Dispenser System for Early Detection and Control of Mosquito Breeding Sites	Marie Gwyneth P. Dagohoy
GENERAL TRIAS CITY	PROJECT FRESH: Automated Freshwater Filter Device for Water Sanitation in Household Facilities and Rivers using ESP32	Alexia Louise V. Arenas
IMUS CITY	BREATHE Canopies: Bioactive Responsive Eco Air Treatment and Habitat Enhancement	Neil Andrei D. Cuenca
LAGUNA	ARDU-IRRI: Smart Arduino-Based Rainwater Irrigation System with Soil Moisture Monitoring and Mosquito-Repellent Feature for Climate-Adaptive Farming	Kimberly A. Basilio
RIZAL	SISIW: Sensor-Integrated Sex Identification Incubation Window for Philippine Mallard Duck	Michaela Louise B. Bagtas
SAN PABLO CITY	KaBOTech: A Smart Mushroom Cultivation System with an Automated Environmental Control and YOLOv11-Based Growth Stage Monitoring	Alyahna Noof J. MD Abdul Malek
SAN PEDRO CITY	Pineapple (<i>Ananas comosus</i>) Biomass for Carbon Dioxide Capture And Coral-Mimetic Mineral Growth in Simulated Acidic Water Systems	Shamritk Josh D. Madrazo
STA. ROSA CITY	Project S.A.F.E.: A Safe and Autonomous System for Flood Control Engineering	Myckah Ella P. Aguila

TEAM CATEGORY

SDO	PROJECT TITLE	RESEARCHERS
ANTIPOLO	BRIDGE: Transforming Borax, Recycled Plastics, Crushed Glass, and Eggshells into Innovative and Durable Eco-Friendly Bricks for a Sustainable Future	Samantha Claire Ballesteros, Venice Kae C. Bordon, Nix Ady D. Maliwat
BATANGAS CITY	Arduino-Driven Quality Assurance for Recycling, Improvement, Sterilization and Efficiency in Aquaculture	Justin Rico D. Magadia, Miriam Ester E. Kendall, Rosalie B. Ronquillo
CAVITE PROVINCE	InForMa: An Innovative Forest Maintenance Drone developed through an IoT-based Raspberry Pi System with Heat Sensors and AI-driven Sound Detection to Address Illegal Logging and Forest Fire complications	Zaira Noelle A. Parba, Ma. Jessie Andrew D. Andaya, Stephanie Jairah D. Tanguin
GENERAL TRIAS CITY	Project DALOY: Development of Aqua-Based Livelihood and Organic Yield Crop System through Tilapia-Induced Nitrogen Farming with IoT Integration using Solar-Powered ESP32	Erish Mae P. Mañago, Jeanne Luke R. Saquilayan, Yuseff Isaac P. Villegas
IMUS CITY	Exhaust Pipe Filter (EPF): An Improvised Carbon Emission Reduction Device for Jeeps	Alicia P. Camit Tippi S. Calubiran Jasmine Trisha D. Rodi
LAGUNA	EYES-ON: Real-Time Driver Drowsiness Detection Using YOLO (You Only Look Once) with Integrated Wearable Vibration Alert System	Rocel L. Caparos, Elija A. Deriquito, Ashley C. Ruperez
LIPA CITY	CLARA: A Low-Cost, Automated Responsive Spraying Atomizer for Controlled Release of Calamansi (Citrofortunella microcarpa) Peel Essential Oil against Adult Coffee Berry Borer (Hypothenemus hampei) Infestation in Coffee Farms	Cybelle G. Laylo, Jhun-Jhun J. Magcawas, Shane Mathew V. Malaluan
QUEZON PROVINCE	FERRION: Bio-based Ferrofluid Filtration System for Microplastic Removal in Water	Yuriah Ivy P. Crisologo, Jhazmine Joy J. Maaliw, Wayne Nicholas C. Allarey
RIZAL	GULUGOD: Pose Projection for Automated Scoliosis Classification and Cobb Angle Quantification Using Machine Learning Algorithm	Joeriette C. Coquial Eds Johan C. Maycacayan Jelaine P. Orain
SAN PABLO CITY	Lignoshield: Utilization and Characterization of Lignin Derived from Coconut (Cocos Nucifera) Husk for the Development of Ultraviolet Protection Film in Glass Windows	Jacquelyn Zeline D. Barcelon, Terence Axton A. Mendoza, Yestin Gio B. Yedra
SAN PEDRO CITY	Utilizing Sweet Plantain (Musa acuminata) Leaves and Potassium Bicarbonate as a Portable Foam Fire Extinguisher	Jaycel Anne S. Alde, Prudence Gayle A. Aquino, Zyrene S. Zaragosa
STA. ROSA CITY	Modular Mobile Farmer: A Sustainable Farming Robot for Farmers	Bryce Eummir Gimeno, Byron Jedd P. Pasacsac
TANAUAN CITY	Detection of Crown-of-Thorns Starfish (Acanthaster planci) by Utilizing YOLOv5 Model	Ryzen Miguel B. Camacho, Leance C. Piamonte,
TAYABAS CITY	IoT-Integrated Mobile App for Real-Time Water pH Regulation and Smart Feeding Management for Recirculating Aquaculture System	Shanaiah Margaret A. Buñales, Yesha C. Eder, Andi Reese Y. Villaverde