



Republic of the Philippines
Department of Education
MIMAROPA REGION
SCHOOLS DIVISION OF MARINDUQUE

Office of the Schools Division Superintendent



November 20, 2024

DIVISION MEMORANDUM

No. 088, s. 2024

RESULTS OF DIVISION SCIENCE & TECHNOLOGY FAIR (DSTF) 2024

To: Assistant Schools Division Superintendent
Chief Education Supervisors
Public Schools District Supervisors
Public Elementary & Secondary School Heads
All Others Concerned

1. This Division announces the enclosed Official Results of the **DIVISION SCIENCE & TECHNOLOGY FAIR 2024** held on November 11, 2024 at Makapuyat National High School, Napo, Santa Cruz, Marinduque.
2. Profound gratitude is conveyed to Dr. Jay P. Peña, the host Public Schools District Supervisor, Mrs. Lorna R. Alojado, School Principal and Teachers of Makapuyat NHS, Santa Cruz East District for the successful hosting of the **DIVISION SCIENCE & TECHNOLOGY FAIR 2024**.
3. Appreciation is also extended to all the members of the Board of Judges elementary and secondary school heads and teachers in the Division for their participation and support to the activity.
4. This Office also extends heartfelt congratulations to all the winners in the Division Science and Technology Fair 2024.
5. Widest dissemination of the contents of this Memorandum is desired.

LYNN G. MENDOZA, EdD
OIC, Schools Division Superintendent

Encls: As stated
Reference: Division Memorandum No. 71, s. 2024
To be indicated in the Division Perpetual Index
under the following subjects

CONTESTS
LEARNERS

LEARNING AREA, SCIENCE
TEACHERS

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Enclosure No. 1 to Division Memorandum No. 088, s. 2024

Official Results of the Division Science & Technology Fair 2024
Held at Makapuyat NHS on November 11, 2024

LIFE SCIENCE-INDIVIDUAL CATEGORY						
Rank	Title	Proponents	Adviser	School Head	School	District
1	Rice Water (<i>Oryza sativa</i>), Cow (<i>Bos Taurus</i>) Bones, and Malanga Lila (<i>Xanthosoma violaceum</i>) Peels as Charcoal Tablets to Enhance the Growth Rate of Lettuce (<i>Lactuca sativa</i>) in a Hydroponic System	Cydel Neth Q. Lingon	Riena I. Rodriguez Mary Rose S. Decena	Democrito M. Nazareno	Marinduque NHS	Boac North
2	Bioshell Fusion: Bio- augmentation of Seashell and Arbuscular Mycorrhizal Fungi as Seashell- derived Fertilizer	Ma. Cristina E. Arabit	Roel M. Rey Paolo Andrew M. Pantoja	Rowel S. Laririt	Landy NHS	Santa Cruz North
3	Project SULONG (Sustainable Utilization of Larvae for Optimal Nutrition Gain): Transforming Rhinoceros Beetle (<i>Oryctes rhinoceros</i>) Larvae into High - Protein Snack for Human Nutrition	Kristoffer Gerardo R. Diana	Perry Angelo C. Manlapaz	Rowel S. Laririt	Landy NHS	Santa Cruz North
4	Agricultural Applications of Bolanoy (<i>Ocimum basilicum</i> L.) leaves and Lemon (<i>Citrus iimon</i>) extract for	Krina L. Singh	Christine J. Naling	Democrito M. Nazareno	Marinduque NHS	Boac North

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	Powdery Mild Control					
5	Why Coconut: Exploring the Potential of Coconut Water (<i>Cocos nucifera</i>) as a Promising Bio- sweetener	Not Venice Angela R. Grimaldo	Perry Angelo C. Manlapaz	Rowel S. Laririt	Landy NHS	Santa Cruz North

LIFE SCIENCE-TEAM CATEGORY						
Rank	Title	Proponents	Adviser	School Head	School	District
1	The Insecticidal Potential of Wild Sugarcane (<i>Saccharum spontaneum</i>) Roots Crude Extract Against Fall armyworm (<i>Spodoptera frugiperda</i>)	Rica Angela L. Labindao Andrea Jade P. Pamonag Jane Ashly P. Pamonag	Jefferson O. Mameng	Democrito M. Nazareno	Marinduque NHS	Boac North
2	Phytochemical Profile of Japanese Lovegrass (<i>Eragrostis tenella</i>) Using a Fourier Transform Infrared (FTIR) Spectroscopy	Tracy Grace L. Nabos Kristine Sophia A. Hermosa Frincez Rhein C. Mandalihan	Jay Anne B. Flores	Democrito M. Nazareno	Marinduque NHS	Boac North
3	Assessing the Efficacy of Ecoharvest Nutramarine Boost: An Innovative Liquid Fertilizer Integrating Bamboo (<i>Bambusa vulgaris</i>) Leaf ash, Kamias (<i>Averrhoa bilimbi</i>), and Fish Byproducts to Augment Plant Growth and soil Quality	Darlene Kate P. Principe Rolando JR. R. Villanueva Angelyn R. Ceribo	Perry Angelo C. Manlapaz	Rowel S. Laririt	Landy NHS	Santa Cruz North

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4	Assessing the efficacy of Ecoharvest Nutramarine Boost: An Innovative Liquid Fertilizer Integrating Bamboo (<i>Bambusa vulgaris</i>) Leaf ash, Kamias (<i>Averrhoa bilimbi</i>), and Fish Byproducts to Augment Plant Growth and Soil Quality	Darlene Kate P. Principe Rolando JR. R. Villanueva Angelyn R. Ceribo	Perry Angelo C. Manlapaz	Rowel S. Laririt	Landy NHS	Santa Cruz North
5	Blending Boundaries: A Study of Male <i>Papilio Lowi's</i> Inter-Species Mating Behavior	Maxine Althea S. Sarmiento Lovely M. Magtahao Nichole N. Ancheta	Mark Anthony S. Nite	Marlita C. Vitto	Tapuyan NHS	Gasan

PHYSICAL SCIENCE-INDIVIDUAL CATEGORY						
Rank	Title	Proponents	Adviser	School Head	School	District
1	Assessing the Potential of Coconut Husk (<i>Cocos Nucifera</i>) Fiber As a Sustainable Acoustic Biomaterial for Noise Mitigation	Hannah Mica Z. Perilla	Perry Angelo C. Manlapaz	Rowel S. Laririt	Landy NHS	Santa Cruz North
2	Design and Performance Assessment of a Solar-Powered River Bin for Efficient Plastic Waste Collection	Lecinaj Ayesa L. Marquez	Mr. Fristian Anthony L. Dormido	Democrito M. Nazareno	Marinduque NHS	Boac North

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3.5	Utilization of Cigarette Butt Waste, Used Paper, and Rice Husk (<i>Oryza sativa</i>) for the Production of Bio Briquette: A Sustainable Approach to Waste Management	Fritz Arnle P. Rioveros	Shiela P. Rioveros	Dave Henry R. Nobleza	Ipil NHS	Santa Cruz North
3.5	EXOLEUM: Oil Spill Remediation Utilizing Thermally Treated Rice Husk (<i>Oryza sativa</i>) and Bamboo (<i>Mmbusa vulgaris</i>) Leaves as an Absorbent	Audrey Angelie R. Villaruel	Roel M. Rey	Rowel S. Laririt	Landy NHS	Santa Cruz North
5	Assessing the Feasibility of Arrowroot (<i>Maranta arundinacea</i>) for Paper and Pulp Manufacturing: A Comparative Evaluation with Conventional Fiber Materials	Glydene Sorrosa	Gueller Dee V. Salazar	Norminda Mabao	Bangbang NHS	Gasan

PHYSICAL SCIENCE-TEAM CATEGORY						
Rank	Title	Proponents	Adviser	School Head	School	District
1	Plastic Bottle (Polyethylene) and Soda-lime-Silica Glass as an Alternative Materials for Producing Floor Tiles	Terrence H. Olivar James Emmanuel M. Luisaga Draven Gomer M. Jambalos	Mrs. Riena I. Rodriguez	Democrito M. Nazareno	Marinduque NHS	Boac North

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2	Rice (<i>Oryza sativa</i>) Straw with FeCl ₃ Magnetic Biocharcoal Composites for Phosphate Reduction in Eutrophic Freshwater Aquaculture Ponds: An Ex-Situ Study	Aira Janel R. Fidelino, Joeyel Clart G. Paras, James Andrei G. Salamat	Roel M. Rey, Paolo Andrew M. Pantoja	Rowel S. Laririt	Landy NHS	Santa Cruz North
3	Rainbow Ink from Tropical Plants: A Botanical Exploration	Althea Vera L. Mistal Princess Nicole L. Langamin Princess Keziah I. Dela Pena	Mr. Fristian Anthony L. Dormido	Democrito M. Nazareno	Marinduque NHS	Boac North
4	IntelliPlasti-pH: Development of pH Sensitive Bioplastics Using Yam (<i>Dioscorea luzonensis</i>) and Taro (<i>Colocasia esculenta</i>) Starch with Bougainvillea Glabra Extract	Maria Alenor L. Jandulong Gavriele N. Melendez Gie Ann S. Lumalang	Jhon Mark P. Mercene	Norminda S. Mabao	Bangbang NHS	Gasan
5	Shell Craft Power: Harnessing Tapalang (<i>Mercenaria mercenaria</i>) Shells as White Asphalt Binder to Reduce Heat Wave	Krisalyn Allysa P. Quindoza, Kyle Gabrielle P. Reginio, Dale Alfred P. Gonzales	Perry Angelo C. Manlapaz, Emalyn R. Rodil	Rowel S. Laririt	Landy NHS	Santa Cruz North

ROBOTICS INTELLIGENT MACHINE-INDIVIDUAL CATEGORY						
Rank	Title	Proponents	Adviser	School Head	School	District
1	Filtrabot: An Arduino- Based Mobile Cleanser for Photocatalytic	Arianne Gayle De Luna	Fristian Anthony L. Dormido	Democrito M. Nazareno	Marinduque NHS	Boac North

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	Filtration of Microparticles					
2	SMS Sunflower Device: Utilization of Arduino and Light Dependent Resistors (LDRs) as Solar Tracker with Short Message Service (SMS) for Energy Alerts	Leigh Kevin P. Rioflorido	Mailyln M. Go	Rowel S. Laririt	Landy NHS	Santa Cruz North
3	Design and Development of Sensorized Brand Circuit Overload Alarm as an Early Warning Device For Electricity Safety	Wrain Zoe P. Calar	Roel M. Rey	Rowel S. Laririt	Landy NHS	Santa Cruz North
4	Arduino-based Earthquake Detector with Integrated Seismic Graph, Alarm, and GSM Notification System for Early Earthquake Warning	Jenelle C. Laylay	Riena I. Rodriguez, Maricel O. Solas	Democrito M. Nazareno	Marinduque NHS	Boac North
5	Biosmart Ignition	Mark Aaron P. Panaligan	Richelle J. Perlas	Lorna R. Alojado	Makapuyat NHS	Santa Cruz East

ROBOTICS INTELLIGENT MACHINE-TEAM CATEGORY						
Rank	Title	Proponents	Adviser	School Head	School	District
1	E-payang: A Green Solution for Weed Management	Jillian Faye M. Jalac, Alizee Marie T. Lara, Juliana May D. Mandia	Frastian Anthony L. Dormido	Democrito M. Nazareno	Marinduque NHS	Boac North
2	BoEndo-Bot: Bottle Exchange System	Aleah Jane Reanzares, Kashley Cloe Santuyo, Trisha Mae Linga	Mae Laarni M. Saporna	Mae Laarni M. Saporna	Yook NHS	Buenavista

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3	NUTRIBOT: An Arduino UNO- Based NPK Monitoring Device with SMS Smart Notification	Anthony L. Nambio, Lance Adrian Ulysses C. Constantino Rhyver Christ M. Regalado	Maily M. Go Emalyn R. Rodil	Rowel S. Laririt	Landy NHS	Santa Cruz North
4	Gastech: An IoT-based Smart Wi-Fi LPG Leakage Detector	Ninia Ricci Z. Naya Justine C. Retardo Charlouichelle V. Laureles	Roel M. Rey Paolo Andrew M. Pantoja	Rowel S. Laririt	Landy NHS	Santa Cruz North
5	MediAlert: Automatic Alarm System with SMS Notification for Timely Medication	Isha Mae Pedernal, Tristan P. Lapido, Jakov Rashaun P. Dela Cruz	Maily M. Go, Emalyn R. Rodil	Rowel S. Laririt	Landy NHS	Santa Cruz North

MATHEMATICS & COMPUTATIONAL SCIENCE –INDIVIDUAL CATEGORY						
Rank	Title	Proponent	Adviser	School Head	School	District
1	Application of the Lotka-Volterra System to Model Predator-Prey Population Dynamics	Joshua Vhonne M. Solimen	Riena I. Rodriguez Maricel O. Solas	Democrito M. Nazareno	Marinduque NHS	Boac North

MATHEMATICS & COMPUTATIONAL SCIENCE –TEAM CATEGORY						
Rank	Title of Study	Proponent/s	Adviser	School Head	School	District
1	Quantifying Oxygen Production: A Formula-Based Study of Tree	Joseph Virgel M. Mawac	Riena I. Rodriguez Maricel O. Solas	Democrito M. Nazareno	Marinduque NHS	Boac North

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Contributions in Marinduque National High School	Josh Raphael M. Malacas Asher F. Cueto				
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SCIENCE INNOVATION EXPO EXPO-INDIVIDUAL CATEGORY						
Rank	Title	Proponents	Adviser	School Head	School	District
1	Automatic Water Distribution System	Mathea Jimyla Erich L. Manoos	Fristian Anthony L Dormido	Democrito M. Nazareno	Marinduque NHS	Boac North
2	Solar-Powered Vending Machine for Incentivized Waste Disposal through Educational Supply	John Reggie L. Peña	Riena I. Rodriguez, Maricel O. Solas	Democrito M. Nazareno	Marinduque NHS	Boac North
3	BIONIC PEST BARRIER: Optimization of a Solar- driven Multifunctional Pest Control Device for Sustainable Pest Management	John Randel G. Paras	Mailyn M. Go	Rowel S. Laririt	Landy NHS	Santa Cruz North
4	Acceptability of a Comprehensive Emergency Response Application (CERA) for Improved Crisis Coordination, and Disaster Preparedness	Philip James Puente	Nira J. Logmao	Lorna R. Alojado	Makapuyat NHS	Santa Cruz East
5	Boosting the Growth Performance and Nutrition of Nile Tilapia (<i>Oreochromis niloticus</i>) with Cuttlefish Bone (<i>Sepia officinalis</i>) and Sea Purslane	Lara Alyzza R. Ampeloquio	Perry Angelo C. Manlapaz	Rowel S. Laririt	Landy NHS	Santa Cruz North

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	(<i>Sesuvium portulacastrum</i>)-based Fish Food Pellet					
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SCIENCE INNOVATION EXPO-TEAM CATEGORY						
Rank	Title	Proponents	Adviser	School Head	School	District
1	Bottle Up: Developing a Reverse Vending Machine with Integrated App-Based Reward System Using Scrap Components	Gieromme L. Monleon Adreanna M. Sartillo Stefani C. Mingi	Riena I. Rodriguez Maricel O. Solas	Democrito M. Nazareno	Marinduque NHS	Boac North
2	Project Tanglaw: Optimizing Saltwater Energy Conversion for Arduino-Based Street Lighting System	Georgia Lei P. Patalinjug Dave O. Rioveros, Von Kleid B. Cabrera	Perry Angelo C. Manlapaz	Rowel S. Laririt	Landy NHS	Sta Cruz North
3	Ground Peanut Oil (<i>Arachis hypogaea</i>) as an Alternative Lubricant for Bicycle Drivetrains	Charlouel V. Laureles Jasiel Jireh R. Vasco Lyx Lynch C. Peneda	Perry Angelo C. Manlapaz	Rowel S. Laririt	Landy NHS	Sta Cruz North
4	Motor Powered Self Motion Compass, An Innovative Approach	Avril Alix Sajul Eurica S. Flores Charisse Yvonne R Sanchez	Richard N. Ortiz	Marivic Z. Zamora	Bognuyan NHS	Gasán
5	Solar Powered Exhaust Fan	Jed E. Reginio, Caleb Jassan F. Esplana, Ren Shadrach G. Yap	Ms. Genlie M. Motol	Jerome S. Catamio	Tigwi NHS	Torrijos

AWITAGHAM					
Rank	Proponent/s	Adviser	School Head	School	District

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1	Zoe Gwynette Rio, Juneah Akeisha Montoya, Yves Lantita	Khristine' M. Lumalang Darwin O. Morales	Democrito M. Nazareno	Marinduque NHS	Boac North
2	Angelyn R. Ceribo John Harvy P. Vargas Alyjha Jhilia M. Manuba Shadid Paul J. Arellano Dustin P. Rivadeniera Mariel Joice B. Caunin Venice Angiela Grimaldo Milchie Grace D. Deles Marynelle Julia A. Prieto Lara Alyzza R. Ampeloquio John Jerick R. Logdat Andly John R. Recalde Rich Cedrick M. Narzoles James L. Remolin Rich Jerran M. Paradero Kharl Cedrick R. Remolin Bryce Russel Adam S.L. Peña Alyzza R. Permejo Michaella R. Rolluque Danice R. Romasanta Louise Danielle S.L. Peña Lorenzo L. Jagong Nica Marie R. Robles Lindczel R. Par Mary Loren P. Ricohermoso	Lea M. Malapad John Razel Baroña	Rowel S. Laririt	Landy NHS	Sta Cruz North

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3	John Harvy P. Vargas	Cythia L. Jocson	Lorna R. Alojado	Makapuyat NHS	Sta Cruz East
4	Alyjha Jhilia M. Manuba	Jimbert S. Cedeno	Thelma M. Salvacion	Buenavista NHS	Buenavista District
5	Shadid Paul J. Arellano Dustin P. Rivadeniera Mariel Joice B. Caunin Venice Angiela Grimaldo Milchie Grace D. Deles Marynelle Julia A. Prieto Lara Alyzza R. Ampeloquio John Jerick R. Logdat Andly John R. Recalde Rich Cedrick M. Narzoles	Alvin P. Leal	Alfredo D. Moldon Jr.	Butansapa NHS	Mogpog District

STEMtokperiment Exhibition					
Rank	Proponent/s	Adviser	School Head	School	District
1	Jade Kendrick L. Rabee	Mary Glo D. Quizada	Ronnel R. Real	Ipil ES	Santa Cruz North
2	Brent Chyler P. Alojado	Genelyn J. Regio	Mateo G. Garcia	Santa Cruz East CS	Santa Cruz East
3	Ma. Angelic Rose Reynoso	Catherine D. Rodriguez	Jaime R. Almonte	Buangan ES	Torrijos
4	Zamantha Ysabel Marcaida	Jamaica Montalban	Arline Mayo	Duyay ES	Boac South
5	Chrisel Anne Y. Llamado	Jake C. Yao	Venus D. Adonis	Tapuyan ES	Gasán

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