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

DEPED-4A-02-RM-22-441

13 July 2022

Regional Memorandum

2022 REGIONAL SCIENCE AND TECHNOLOGY FAIR

WINNERS

To   **Schools Division Superintendents**

1. This Office through the Curriculum and Learning Management Division (CLMD) congratulates the winners of **2022 Regional Science and Technology Fair (RSTF)** Winners held last June 27 – July 1, 2022 via Online.

2. Attached is the list of winners, special awardee (see Enclosure 1) and official list of nominees to the 2022 National Science and Technology Fair (see Enclosure 2).

3. Immediate dissemination of this Memorandum is desired.

FRANCIS CESAR B. BRINGAS
Regional Director

clmd/mmn

Enclosure 1

Winners of the 2022 Regional Science and Technology Fair

Category	SDO	School	Student Name	Coach	Title	Place
			Siyensikula			
1	Tayabas City	Luis Palad Integrated High School	Sean C. Fernandez	Marvin J. Rosales/ Reymann Kristian F. Zubieta	Quantum Mechanics	1st Place
2	Laguna	Laguna Senior High School	Jomar C. Garcia	Janice Joy P. Leonardo	Quantum Mechanics	2nd Place
3	Cavite Province	Angelo L. Loyola Senior High School	Chrysler Dele B. Ordas	Ryan S. Cutamora	Invasive Species	3rd Place
			Peer to Peer			
	Tanauan City	Tanauan City Integrated High School	Reina Trisha C. Narvaez, Pauleen May P. Biscocho, Charles Joseph M. Mercado	Rowie Anne D. Moreno	Gene Silencing	1st Place
	Batangas City		Merry Ruth Villalei C. Aquino	Razel M. Ferrer	Osmosis	2nd Place
	Cavite Province	Angelo L. Loyola Senior High School	Chrysler Dele B. Ordas	Ryan S. Cutamora	Invasive Species	3rd Place
			STEMtokperiments			
JHS	Cavite City	Cavite National High School	Samuel Timothy Bernal	IVY Dr. Rosales	Physics: First Law of Thermodynamics	1st Place
JHS	Tanauan City	Tinurik National High School	JILIANE M. ALUMBRO	JOHN RUSSELL L. ODESTE	Fire Fighter Experiment	2nd Place
JHS	Lipa City	Pinagtongulan Integrated National High School	Mark Miguel I. Yanes	MARIAN T. SILVA	Hands on Fire Experiment	3rd Place

SHS	Cabuyao City	Cabuyao Integrated National High School	JOHN AARHON O. NOVILLA	JOHN REY G. CARLOM	Carbon Fiber Durability Test with Application of Pyrolysis Theory	1st Place
SHS	Quezon	Paaralang Sekundarya ng Lucban Integrated School	Sophia Clodette O. Valeña	Grace Joy A. Salumbides	Le Chatelier's Principle	2nd Place
SHS	Tanauan City	Tanuan City Integrated High School	Kenneth B. Ibardeloza	Benjamin M. Pedrosa	Solar Energy System Utilizing Supercapacitors as Energy Storage	3rd Place
Likha						
Life Science (Individual)	Tanauan City	Tanauan City Integrated High School	Jayron James s. Sanque	Osmerando P. Alcantara Jr.	In Silico Molecular Docking and Zebrafish (Danio rerio) Assay Model in Evaluating Anxiolytic and Antidepressant Activity of Petrea volubilis L. Ethanolic Extract	1st Place
Life Science (Individual)	Cavite Province	Angelo L. Loyola Senior High School	Julia Kristianna M. Garcia	Ryan S. Cutamora	IN VITRO ANGIOTENSIN-CONVERTING ENZYME II (ACE2) INHIBITION OF ROSELLE (Hibiscus sabdariffa L.) PETALS EXTRACT USING FLUOROMETRIC ASSAY	2nd Place
Life Science (Individual)	Bacoor City	SHS in San Nicholas III, Bacoor City	Kenjie S. Fortaleza	Elarcie Balsomo	The Optimization of Pachyrhizus erosus (Yam Beans) Seeds, Momordica charantia L. var. abbreviata	3rd Place

					Seringe (Wild Bitter Gourd) Seeds and Saccharum	
Life Science (Team)	Tanauan City	Tanauan City Integrated High School	Maricar N. Marcos / Dann Creus V. Motilla	Osmerando P. Alcantara Jr.	Plankton Diversification and Biomimicry Engineering in Designing and Installment of Artificial Spawning Ground in Proliferating Sardinella tawilis larvae	1st Place
Life Science (Team)	Bacoor City	Bacoor National High School-Main	Marc Xenix G. Oblimar, Daniella Mae M. Baraquiel, Angel Francheska C. Carel	Lilibeth M. Mayor	Anti-Thrombocytopenic Effect of Eleusine Indica (Indian Goosegrass) Leaf Extract on Aspirin-Induced ICR Mice	2nd Place
Life Science (Team)	San Pablo City	San Pablo City Science Integrated High School	MIKAELA JOY M. GARCIA, DARWIN T. SEE, DIRK P. SAMSON	Franz Kevin B. Manalo, Jennilou A. De Villa	FUNGICIDAL ACTIVITY OF GREEN SYNTHESIZED SILVER NANOPARTICLES USING NONI LEAF (Morinda citrifolia) DEPOSITED ON MULTI-WALLED CARBON NANOTUBES BY CHEMICAL REDUCTION METHOD AGAINST FUSARIUM WILT FUNGUS (Fusarium oxysporum)	3rd Place
Physical Science (Individual)	Tayabas City	Luis Palad integrated High School	KAYCEE A. MALINGCON	RICHILYN S. PAGANA	Production and Efficacy of Snake Plant (Sansevieria trifasciata) Biopolymer as Filter Layer for	1st

					Face Masks through Melt-Blown Extrusion	
Physical Science (Individual)	San Pablo City	San Pablo City Science Integrated High School	Franz Kevin B. Manalo	JAZMIN M. MAGPANTAY'	GROWTH OF TITANIUM DIOXIDE-MODIFIED ZINC OXIDE NANOWIRE ON STAINLESS STEEL MESH FOR PIEZO-ENHANCED PHOTOCATALYTIC DEGRADATION OF ORGANIC POLLUTANTS IN WATER	2nd
Physical Science (Individual)	Cavite City	Cavite National High School - Junior High School	Samuel Timothy B. Bernal	Louie-Zel M. Pedro	Bioavailability Enrichment of Curcumin in Turmeric (Curcuma longa) Rhizomes using Black Pepper (Piper nigrum) and Coconut (Cocos nucifera) Meat	3rd
Physical Science (Team)	Quezon	Quezon Science High School	David Kyle D. Lucila, John Benedict Z. Maxino, and Dixie S. Padua	Dulce C. Regulto	Para Grass (Brachiaria mutica) as an Additive Component for the Optimization of Low-Density Polyethylene Plastic and Polystyrene as Synthetic Pyrolytic Fuel for Gasoline-Based Vehicular Use	1st
Physical Science (Team)	San Pablo City	San Pablo City Science Integrated High School	Alexis Leigh C. Ramos, Charisse Jen T. Salazar, Rovic	Franz Kevin B. Manalo	CHARACTERIZATION AND UTILIZATION OF PINEAPPLE LEAF FIBER	2nd

			Nivram B. Velasco		REINFORCED COCONUT ALKYD RESIN COMPOSITES AS ALTERNATIVE SOURCE OF FIBERGLASS	
Physical Science (Team)	Tayabas City	Luis Palad Integrated High School	Cada, Sofia Lizbeth R., Cabuyao, Alethea S.	Ladessa R. Padua	SORAWI: Hybrid Renewable Energy System from Solar, Rain, and Wind Power	3rd
Mathematics and Computational Science (Individual)	Batangas Province	BAUAN TECHNICAL INTEGRATE D HIGH SCHOOL	RONN MICHAEL G. AZUCENA	NORMAN R. MARQUE Z	TRIG RACEIOS: AN EDUCATIONA L BOARD GAME FOR SOLIDIFICATI ON OF TRIGONOMET RIC FOUNDATION	1st
Mathematics and Computational Science (Individual)	Batangas City	Paharang Integrated School	Jordan O.Gupit		Applying Remote Sensing and Geographic System (GIS) in Monitoring Crop Health of Select Cornfields in Batangas City	2nd
Mathematics and Computational Science (Individual)	Rizal	Rizal National Science High School	Pacis, Aaron John C.	Glicerio C. Estacio Jr.	Application of Discrete Cosine Transform for Subcutaneous Vein Detector	2nd
Mathematics and Computational Science (Team)	Bacoor City	SHS within Bacoor Elementary School	Adrian Rodel M. Bangalando, Sarah C. Elero, Therese Marie Francheska DL. Salazar	Marlone J. Arevalo	In Silico Design of Novel Recombinant Plasmid for CRISPR/Cas9-sgRNA system Gene Editing of mutated TP53 as a Possible Cancer Treatment	1st

Mathematics and Computational Science (Team)	Batangas Province	BAUAN TECHNICAL INTEGRATED HIGH SCHOOL	ROVIN D. MAUHAY. RAYMOND JOHN A. MELECIO, JERALLAINE MAE M. MANALO, MICAELLA C. MANALO	NORMAN R. MARQUEZ	UNIT TOWER: A BLOCK STACKING GAME FOR MASTERING METRIC SYSTEM OF MEASUREMENTS	2nd
Mathematics and Computational Science (Team)	Tayabas City	Luis Palad Integrated High School	Ambas, Shelem Anne E. and Argete, Bea Chandelle F.	Wilson C. Ramos	WARI: Weather Agri-Application for Real-time Information	3rd
Robotics and Intelligent Machines Individual	Quezon	Quezon Science High School (1st)	Arabella P. Pua	Dulce C. Regulto	IoT-Based Device Using Raspberry Pi and Arduino Uno as an Automatic Monitoring System for Aqua Farms	1st Place
Robotics and Intelligent Machines Individual	Rizal	RIZAL NATIONAL SCIENCE HIGH SCHOOL (2nd)	ALYSSA YSABELLE D. DE VILLA	ROMULO B. ARADA, MARLON P. STA. CATALINA	VEINBERRY: Development of Low-cost Subcutaneous Vein Detector for IV Fluid Insertion	2nd Place
Robotics and Intelligent Machines Individual	Imus City	GEN. JUAN CASTANEDA SENIOR HIGH SCHOOL (3rd)	Faiza P. Amerol	EDGAR A. RIVERA	ArSaka: Arduino Soil-Moisture-Based Drip Irrigation System for Improving Rice Production	3rd Place
Robotics and Intelligent Machines Team	San Pablo City	San Pablo City Science Integrated High School (1st)	Nyll Elijah C. Del Valle, Margarette Kiel S. Gordo, Adrienne Amberly U. Palomar	Franz Kevin B. Manalo,	SOTERIA: AN ARDUINO-BASED SERPENTBOT WITH X4M300 UWB-RADAR AS A RESCUE BOT	1st Place
Robotics and Intelligent Machines Team	Tanauan City	TANAUAN CITY INTEGRATED HIGH SCHOOL (2nd)	Ace S. Cordova , Alexandria M. Caraan, Daniel John P. Tocmo	Shelah O. Ladanan	Prototype Raspberry Pi Drone Monitoring System for Precision Agriculture	2nd Place

Robotics and Intelligent Machines Team	Rizal	Rizal National Science High School (3rd)	Malena Riz C. Ballon, Val Allen U. Eltagonde, Keno S. Jose	Marlon P. Sta. Catalina, Nanette S. Sta. Catalinae	BANTAY: Raspberry Pi-based Automated Non-Contact Disinfection with Temperature and Face Mask Detection Yielding Entry Lock System	3rd Place

Enclosure 2

Official List of Nominees to the 2022 National Science and Technology Fair

Category	SDO	School	Students' Name	Coach	Title
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1	Tayabas City	Luis Palad Integrated High School	Sean C. Fernandez	Marvin J. Rosales/ Reymann Kristian F. Zubieta	Quantum Mechanics
2	Laguna	Laguna Senior High School	Jomar C. Garcia	Janice Joy P. Leonardo	Quantum Mechanics
STEMtokperiments					
JHS	Cavite City	Cavite National High School	Samuel Timothy Bernal	IVY Dr. Rosales	Physics: First Law of Thermodynamics
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Likha					
Life Science (Individual)	Tanauan City	Tanauan City Integrated High School	Jayron James s. Sanque	Osmerando P. Alcantara Jr.	In Silico Molecular Docking and Zebrafish (Danio rerio) Assay Model in Evaluating Anxiolytic and Antidepressant Activity of Petrea volubilis L. Ethanolic Extract
Life Science (Team)	Tanauan City	Tanauan City Integrated High School	Maricar N. Marcos / Dann Creus V. Motilla	Osmerando P. Alcantara Jr.	Plankton Diversification and Biomimicry Engineering in Designing and Installment of Artificial Spawning Ground in Proliferating Sardinella tawilis larvae
Physical Science (Individual)	Tayabas City	Luis Palad integrated High School	KAYCEE A. MALINGCON	RICHILYN S. PAGANA	Production and Efficacy of Snake Plant (Sansevieria trifasciata) Biopolymer as

					Filter Layer for Face Masks through Melt-Blown Extrusion
Physical Science (Team)	Quezon	Quezon Science High School	David Kyle D. Lucila, John Benedict Z. Maxino, and Dixie S. Padua	Dulce C. Regulto	Para Grass (Brachiaria mutica) as an Additive Component for the Optimization of Low-Density Polyethylene Plastic and Polystyrene as Synthetic Pyrolytic Fuel for Gasoline-Based Vehicular Use
Mathematics and Computational Science (Individual)	Batangas Province	BAUAN TECHNICAL INTEGRATED HIGH SCHOOL	RONN MICHAEL G. AZUCENA	NORMAN R. MARQUEZ	TRIG RACEIOS: AN EDUCATIONAL BOARD GAME FOR SOLIDIFICATION OF TRIGONOMETRIC FOUNDATION
Mathematics and Computational Science (Team)	Bacoor City	SHS within Bacoor Elementary School	Adrian Rodel M. Bangalando, Sarah C. Elero, Therese Marie Francheska DL. Salazar	Marlone J. Arevalo	In Silico Design of Novel Recombinant Plasmid for CRISPR/Cas9-sgRNA system Gene Editing of mutated TP53 as a Possible Cancer Treatment
Robotics and Intelligent Machines Individual	Quezon	Quezon Science High School (1st)	Arabella P. Pua	Dulce C. Regulto	IoT-Based Device Using Raspberry Pi and Arduino Uno as an Automatic Monitoring System for Aqua Farms
Robotics and Intelligent Machines Team	San Pablo City	San Pablo City Science Integrated High School (1st)	Nyll Elijah C. Del Valle, Margarette Kiel S. Gordo, Adrienne Amberly U. Palomar	Franz Kevin B. Manalo,	SOTERIA: AN ARDUINO-BASED SERPENTBOT WITH X4M300 UWB-RADAR AS A RESCUE BOT