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

CLMD-RM-2023-723

30 November 2023

Regional Memorandum
No. 723 s. 2023

QUALIFIERS FOR THE 2023 REGIONAL SCIENCE AND TECHNOLOGY FAIR (RSTF)

To **Schools Division Superintendents**

1. Relative to Regional Memorandum No. 695 s. 2023 entitled "2023 Regional Science and Technology Fair (RSTF)", this Office announces the qualifiers for this event which will be held on December 5 to 6, 2023 at the Bulwagan ng Karangalan Hall, DepEd Region IV-A, Karangalan Village, Cainta, Rizal.

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 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 by the First Edition of the School, Division, Regional, and National Science and Technology Fair Guidebook.

3. The following are the enclosures 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

cc: clmd/ROC7

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Enclosure 1: Regional Qualifiers for Tuklas Life Science Category

Individual Category

SCHOOL	SDO	PROJECT TITLE
Indang National Highschool	CAVITE PROVINCE	Different Levels of Coconut Water as a Medium for Macapuno (Cocos nucifera var. macapuno) Embryo Rescue Culture
Quezon National High School	QUEZON PROVINCE	Synergized Activity of Makahiya (Mimosa pudica) and Guava (Psidium guajava) Leaves Extract against Pseudomonas Aeruginosa and Staphylococcus aureus, Causative Pathogens of Surgical Site Infection
Rizal National Science High School	RIZAL	Influencing Factors on Growth, Polystyrene and Silicone Biodegradation Capacity of Mealworm (Tenebrio Molitor): An Input to an Integrated Entomoremediation Community-based Environmental Sustainability Program

Team Category

SCHOOL	SDO	PROJECT TITLE
Pacita Complex National High School	SAN PEDRO CITY	Meta-Analytic Guided Design of Green Synthesized Cu-Zn Nanoparticles from Carabao Mango (Mangifera indica L.) Peel's Extract and its Exploratory Antifungal Activity against Candida albicans
Angelo L. Loyola Senior High School	CAVITE PROVINCE	Antitermitic and Larvicidal Activities of False Shamrock (Oxalis triangularis) Leaves Extract Against Philippine Milk Termites (Coptotermes vastator) and Yellow Fever Mosquito (Aedes aegypti) Larvae
Quezon National High School	QUEZON PROVINCE	Organic Mulch out of Coconut Coir (Cocos nucifera) and Fish Scales (Dermal denticles) as Growth Enhancer for Lettuce (Lactuca sativa) Cultivation

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

Individual Category

SCHOOL	SDO	PROJECT TITLE
Los Baños Senior High	LAGUNA	Potential Use of Corn (Zea mays) Husk with Soy (Glycine max) Wax as Water Resistant Paper Bags
Calamba City Science Integrated School	CALAMBA CITY	PeaSole: (Arachis hypogaea) Peanut Hull as an Insulating Material for Footwear
Angelo L. Loyola Senior High School	CAVITE PROVINCE	Synthesis and Characterization of Natural Threads Derived from Paragis Grass (Eleusine indica) Incorporated with Cotton Fiber
Luis Palad Integrated High School	TAYABAS	Detection of Rice Plant Stem Borer (Scirpophaga incertulas) Egg Mass through Python-based Image Processing

Team Category

SCHOOL	SDO	PROJECT TITLE
SHS in San Nicholas III,	BACOOR CITY	Application of *Theobroma cacao* L. (Cacao) Pod Husk Fibers Packed in Nylon Nets as Eco-friendly Sorbent for Oil Sorption
Angelo L. Loyola Senior High School	CAVITE PROVINCE	Photocatalytic Degradation of Rhodamine B Dye Using Hydroxyapatite Particles Derived from Blue Swimming Crab (Portunus pelagicus) Carapaces
Antipolo City National Science and Technology High School	ANTIPOLO CITY	Adsorption of Acetic Acid from Aqueous Solution Using Spent Coffee Grounds Activated Carbon (SCGAC)

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

Individual Category

SCHOOL	SDO	PROJECT TITLE
Luis Palad Integrated High School	TAYABAS	VISMAPS: An Application Software Utilizing Normalized Difference Vegetation Index Embedded with a Decision Support System in Monitoring and Predicting the Land Use Land Cover of Dagatan Lake Vicinity in Tayabas City
General Emilio Aguinaldo National High School	IMUS CITY	Task & Focus: Development of an Anti-Procrastination Productivity Application for Students' Academic Procrastination
Angelo L. Loyola Senior High School	CAVITE PROVINCE	Mathematical Models for Determining Reverberation Time of Acoustic Panels Made from Sugarcane (Saccharum Officinarum) Bagasse Integrated With Selected Recyclable Materials

Team Category

SCHOOL	SDO	PROJECT TITLE
Senior High School Within Bacoor Elementary School	BACOOR CITY	Precision Unleashed: Harnessing the Potential of Cas9 sgRNA Data for Cutting-Edge TP-53 Gene Therapy
Rizal National Science High School	RIZAL	MangoPro: Performance Analysis of MobileNetV2's Machine Learning for the Detection of Diseases in Mango (Mangifera indica L.)
Calamba City Science Integrated School	CALAMBA CITY	Project CoR: An Innovative Mathematical Formula in Predicting Future Annual Values of Humidity, Temperature, and Rainfall in Calabarzon

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

INDIVIDUAL CATEGORY

SCHOOL	SDO	PROJECT TITLE
Batangas CIHS	BATANGAS CITY	Ligtas: Life-Saving Intelligent Ground-Based Teleoperated Robot as Alert System
Cabuyao INHS	CABUYAO CITY	Automated Alcohol Misting and UV-C Light Sterilizing Robot for Efficient Room Sanitation
Calamba CSIHS	CALAMBA	Distrite: A Device/System That Prioritizes The Person With Disabilities (PWD) And Senior Citizen's Rights

TEAM CATEGORY

SCHOOL	SDO	PROJECT TITLE
Cavite SIHS	CAVITE PROV.	DAGITAB: Arduino-Based Efficient Automatic Algae Harvester Utilizing Photosynthetic Electrons
Gen F. Yengko SHS	IMUS	Agrosmartflow: Automated Soil Moisture-Based Irrigation and Soil Content Nutrition Management System
Rizal NSHS	RIZAL PROV.	Raspberry Pi-Embedded System Via Convolutional Neutral Network (CNN) Model for Automated Detection of Eye Diseases

Enclosure No. 5: Regional Qualifiers for Science Innovation Expo

INDIVIDUAL CATEGORY

SCHOOL	SDO	PROJECT TITLE
Calamba SIS	CALAMBA CITY	Mango Peels, Corn Husk and Peanut Shells as Torrefied Lignocellulosic Biomass for Solid Combustion Charcoal
Rizal SHS	RIZAL	Reels: Recognizing Glass Eels Via Convolution Neutral Network-Based Automated System for Morphological Identification
Cavite SIS	CAVITE PROV.	Raise: Routinized Arduino-Incorporated Solar Energy-Powered Kiln for Bamboo and Wood Drying

TEAM CATEGORY

SCHOOL	SDO	PROJECT TITLE
Cavite SIS	CAVITE PROV	ASLG (Assistive Sign Language Gloves): An Innovative Hand Movement Transcriber Integrated with Mobile App for Verbal Communication and Language Translation
Luis Palad IHS	TAYABAS	Solar-Powered Mechanical Transplater
Calaca SHS	BATANGAS PROV	Sustainable Farming: Feasibility of Hydroponics With Multi-Purpose Free Energy Water Pump Integration