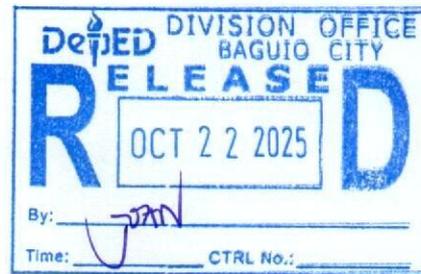




Republic of the Philippines
Department of Education
Cordillera Administrative Region
SCHOOLS DIVISION OF BAGUIO CITY



October 21, 2025

DIVISION MEMORANDUM

No. **680-2025**

**2025 DIVISION SCIENCE AND MATHEMATICS FESTIVAL TWG AND
QUALIFIERS TO THE 2025 DIVISION SCIENCE
& TECHNOLOGY FAIR**

To: All Chief Education Supervisors
Education Program Supervisors
Public Schools District Supervisors
Public and Private Secondary School Heads
Public and Private Elementary School Heads
Teachers, SDO Personnel
Others Concerned

1. This is to announce the composition of the Technical Working Group (TWG) for the conduct of the 2025 Division Science and Mathematics Festival and to inform all concerned of the qualifiers to the School Year 2025-2026 Division Science and Technology Fair – Tuklas, with the theme: “Spatialyze: Surveying Societies, Sensing Solutions”.
2. The festival will be held on October 25, 2025, from 8:00 a.m. to 5:00 p.m. at Baguio City High School.
3. Attached are the following enclosures for your reference:
Enclosure 1. List of Technical Working Group Members
Enclosure 2. Revised Inquirace Mechanics
Enclosure 3. List of Tuklas Qualifiers
4. Coaches and TWGs in all events shall be entitled to one (1) day service credit as per DO 13, s. 2024 and CSC DBM Joint Circular No. 2, s. 2004.
5. Immediate and wide dissemination of this Memorandum is desired.

SORAYA T. FACULO PhD, CESO V
Schools Division Superintendent

For the Schools Division Superintendent:

CARMEL F. MERIS
OIC-Assistant Schools Division Superintendent



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Enclosure 1. List of Members of the Technical Working Group

Technical Working Group

COMMITTEE/ EVENT	MEMBERS	NO. OF TWG	TERMS OF REFERENCE
1. Tuklas/SIP	Brenda P. Contada- Lead Marilyn D. Bugatti-Co- Lead Life: Michael Edrian S. Ferrer Christopher Coral MCS: Daryl C. Magalalit Lea R. Rebolledo Physical: Victorie Ann Pula Geraldine Lapiguera RIM/Innovation: Joel V. Hinay Zaldy B. Liquigan	10	1. Review submitted manuscripts and note on the completeness of required forms; 2. Organize the SIP manuscripts and distribute to the judges; 3. Registers contestants and coaches (separate sheet); 4. Plan/facilitate the display of boards; 5. Assist the judges and participants during the judging; 6. Prepare evaluation sheets and ensure complete documentation of winners; 7. Collect photocopy of the ID card of the Top 3 per category; 8. Return manuscripts to proponents
2. Project RISE	Evelyn R. Nocelo Grace L. Santos Johny P. Buasen	3	1. Organize the RISE manuscripts and distribute to the judges; 2. Registers contestants and coaches; 3. Plan/facilitate the display of boards; 4. Assist the judges and participants during the judging 5. Prepare evaluation



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			<p>sheets and ensure complete documentation of winners/results;</p> <p>6. Collect photocopy of the ID card of the Top 3 per category.</p> <p>7. Return manuscripts to the proponents</p>
3. SciDAMA	<p>Chadrey Madume-Chief Arbiter (Elem) Emma Wakat</p> <p>Allan Litaoen-Chief Arbiter (Secondary)</p> <p>3 coaches per grade level as arbiters (Grades 3-10)-to be determined during the event)</p>	27	<p>1. Prepare materials for the tournament</p> <p>2. Manage the SCIDAMA tournament</p> <ul style="list-style-type: none"> • Identify 3 TWG members from among the coaches • Register contestants and coaches • Document the results (with signature of arbiters) <p>3. Collect photocopy of the ID card of the Top 3 per grade level</p>
4. Inquirace	<p>Jeany Dupo- Over All Dave Nardo Lourdes Lomas-e- Judge</p> <p>Grade 4-6: Engelbert Pednga-Lead Ethel Pagaduan Clyde Acong</p> <p>Grade 7-9: Pauline Punasen-Lead Marez D. Pinder Rowena M. Garcia</p> <p>Grade 10-12: Esther L. Paya-a-Lead Wanda A. Casio-Co- Lead Jessica Ruiz</p>	31	<p>1. Prepare questions and materials for the race</p> <p>2. Manage the conduct of the race</p> <ul style="list-style-type: none"> • Register contestants and coaches, document results with appropriate signatures, • Identify 10 TWG per category from among the coaches <p>3. Collect photocopy of the ID card of</p>



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			the Top 3 per category.
5. Robotics	<p>Nancy Dumalili-Lead</p> <p>Jared Lyle Ang Romeo Bano-oy Peterson Montemayor Jefferson Lee</p>	5	<ol style="list-style-type: none"> 1. Manage the conduct of the competition 2. Register contestants and coaches; 3. Document results; 3. Provide playing fields for Line Tracing and Sumobot
6. Program	<p>Marilyn Bugatti-Lead Bryan Pacsayan Mark Fidelis Nino Marinez-Co-lead Editha L. Laop Caster Badival Michael Vargas Geraldine Banos</p>	4	<ol style="list-style-type: none"> 1. Prepare invitation/programme 2. In charge of opening and closing program. 3. Document all the events
7. Secretariat/Food and Token/	<p>Edenne Sherwin-Lead Phoebe Jane V. Navarette-1,2&3 Lily B. Mabalot-1,2 &3 Christopher G. Oliva- 8 Roberto Lopez-5 & 6 Julio K. Canipas-5 &6 Edenne Sherwin-8 Julie Ann Siong-8 Julie Roque-8 Marina Apayo-8 Judy Paran-7 Lolita Conde-7</p>	11	<ol style="list-style-type: none"> 1. Prepare certificate of attendance 2. Prepares Certificate of recognition of judges and TWG 3. Registers all TWG and judges 4. Gather registration /attendance sheets of contestants and coaches per event 5. Distribute meal and snacks of TWG 6. Distribute token upon receipt of results and other documents 8. Distribute and collect accomplished DTRs and prepare certificate of attendance 9. Prepares certificates of participation and recognition of winners



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8. Physical Arrangement	Marissa Wayan Dindo Sergio Nino Martinez Dave U. Nardo Zaldy B. Liquigan Joel V. Hinay Christopher Coral Johny P. Buasen	2	1. Identify and prepare venues for the different events including the stage.
9. Judges		17	
Total		110	

Note: There will be a meeting of Inquirace and TWG (12) on October 23, 2025 at the SDO Training Hall at 2:30PM. While the meeting of Robotics TWG will be at Baguio City High School on October 24, 2025 at 3:00PM

Display of Boards (Tuklas and RISE teacher category will start at 4:30PM on October 24, 2025)



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Enclosure 2. Revised Inquirace Mechanics

Inquirace Mechanics

A. Categories and Team Composition

Each team shall be composed of three (3) members:

- Category A (Elementary): 1 Grade 4, 1 Grade 5, 1 Grade 6
- Category B (Junior High School): 1 Grade 7, 1 Grade 8, 1 Grade 9
- Category C (Senior High School): 1 Grade 10, 1 Grade 11, 1 Grade 12

B. Contest Proper

a. Quiz Bee (Content: 40%)

1. Each team participates in an oral quiz Bee.
2. The quiz shall consist of 9 items (3 Easy, 3 Average, and 3 Difficult) for both elementary and secondary level (multiple-choice/identification/problem-solving) covering the three strands: content knowledge, inquiry skills/procedural knowledge, and valuing/epistemic knowledge
3. Time allotment:

Level of Test	Test Type	Time	Score
Easy (Low Depth of Knowledge)	Multiple-choice	30 sec.	1 point
Average (Medium Depth of Knowledge)	Identification	45 sec.	2 points
Difficult (High Level of Knowledge)	Identification / Problem-solving	60 sec.	3 points

4. The coverage of questions is from third quarter of previous year up to second quarter of current grade level. Earth and Life Science and Physical Science for Grades 11 to 12.
5. All members will answer a set of questions as a team.
6. Questions will be prepared by the coaches on a $\frac{1}{4}$ of an A4 bond paper. The questions will be drawn from the questions prepared by the coaches.
***each team shall bring a marker and at least 12 sheets of $\frac{1}{2}$ cross-wise A4 bond paper for them to write their answers.**
7. **The top 5 teams will proceed to the Inquiry Race**

b. Inquiry Race (Process Skills: 60%)

1. Teams move through a series of stations in relay sequence performing grade appropriate inquiry tasks:
 - Station 1 → Grade 4 (or Grade 7 / 10) member
 - Station 2 → Grade 5 (or Grade 8 / 11) member
 - Station 3 → Grade 6 (or Grade 9 / 12) member
2. Overall Time Limit: 15 minutes (consists of three stations – 5 minutes per station). The next grade level can not proceed if the lower grade level is not able to do the task correctly.
3. The TWG shall prepare the Inquiry Race tasks.



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C. Scoring

1. Race Performance (Stations 1–3): 60%
 - The fastest team to finish earns the full 15 points.
 - Others scored proportionally:
Race Score = $\frac{\text{Fastest Time}}{\text{Team Time}} \times 15$
 - Teams exceeding the 15-minute limit = **Disqualified.**
2. Final Score = Elimination Quiz Score (40%) + Race Score (60%)
3. Tie-breaker: If final scores are tied, a sudden-death inquiry question is given, answerable by any team member.



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Enclosure 3. List of Qualified TUKLAS entries

Life Science-Team				
	Research Title	Proponents	Coach	School
1	Phytochemical Profiling and Toxicity Assessment of Whorhorta (<i>Bidens pilosa</i>) Shoot Crude Extract	Alwing, Marimar P. Dapyawen, Lemuel Tyner J. Guinungo, Monica P.	Johnny P. Buasen	Sto. Tomas National High School
2	Utilizing Crude <i>Citrus maxima</i> (Pomelo) Peel Extract in Producing Mosquito-Repellant Incense	Addamo, Joren Edward I. Beligen, Leonard T. Smith, Crystal Maiden B.	Ma. Angelica H. Mangili	Pinsao National High School
3	Exploring the Effectiveness of Mushroom Substrates from Oyster (<i>Pleurotus ostreatus</i>) Mushrooms for Wombok (<i>Brassica rapa subs. Pekinensis</i>)	Herman C. Calse Chloe Cyrelle M. Grande Khatelyn L. Lopez	Jerry L. Manogan	Guisad Valley National High School
4	Phytochemical Constituents of Bolivian Sunset	Dazzle F. Osio Yrel Faith B. Magno Daryl M. Paran	Rufina D. Cads	BCNSHSI
5	Cytotoxicity Assessment of Bolivian Sunset	Ethan Azriel Guerrero Kezia Rhie Balinto Ruq Ezer Behis	Rufina D. Cads	BCNSHS
6	VSC: A Portable Real Time Monitor for Heartbeat and Oxygen Levels	Stephen Joshua Banes Elesia Susan Carantes Chloe Vielle Quines	Marina E. Apayo	Mil-an NHS
7.	Spatio-Temporal Distribution of Benguet Lily (<i>Lilium philippinense</i>) in Ampucao, Itogon, Benguet	1. Besway, Rasec B. 2. Buyao, Kristine Joy B. 3. Manipon, Shyna Monica B.	Efren Matthew C. De Peralta	Baguio City High School
8	Evaluating the Antibacterial Activity of <i>Chamaecostus Cuspidatus</i> Leaf Extract Against <i>Pseudomonas aeruginosa</i>	1. Aragon, Khrisha Angel L. 2. Ignacio, Einra Eudora P. 3. Santiago, Leslie Kate S.	Efren Matthew C. De Peralta	Baguio City High School
9	In Vitro Antioxidant Activity of Flavonoid Extracts from (<i>Taraxacum officinale</i>) Flowers Using the DPPH Assay	1. Baldago, Mariane T. 2. Caswang, Hannah Chloe C. 3. Ognayon, Arwen Jilliene A.	Efren Matthew C. De Peralta	Baguio City High School



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10	Comparative Antibacterial Activity of <i>Ageratum conyzoides</i> L. Stem Extract at Varying Concentrations Against <i>Escherichia coli</i>	1. De Vera, Veronica M. 2. Gandia, Maxine Kay D. 3. Lungayan, Aiza Jhane G.	Efren Matthew C. De Peralta	Baguio City High School
11	Evaluating the Antibacterial Activity of <i>Artemisia vulgaris</i> Leaf Extract against <i>Pseudomonas aeruginosa</i>	1. De la Cruz, Kryzel 2. Supangan, Louise 3. Calleda, Jose	Efren Matthew C. De Peralta	Baguio City High School
12	Evaluating the Antimicrobial Effects of Lactic Acid derived from <i>Chlorophytum comosum</i> on the Shelf Life of Chicken Meat	1. Jamhayka Maranan 2. Trisha Mae B. Enkiwe 3. Jose Raphael A. Clavio	Efren Matthew C. De Peralta	Baguio City High School
13	The Effect of Chayote (<i>Sechium edule</i>) Leaves Extract in Prolonging the Lifespan of Cabbage (<i>Brassica oleracea var</i>	1. Sean Haydriel C. Ana-ao 2. Jadeyah Reecka T. Estrella 3. Mark Justine D. Posugac	Lissa B. Roxas	BCNSHS
Physical Science-Team				
1	Biodegradable Plastic Made from the Corm and Fiber of Bitter Ginger (<i>Zingiber zerumbet</i>)	Emmhonjoylle S. Lee, Mariane Chardonnay C. Enano, and Kim Dasha M. Tenorio	Rufina D. Cadsí	BCNSHS
2	Utilization of Aluminosilicate Zeolite Activated Biochar from Banana (<i>Musa acuminata</i>)Peels, Coconut (<i>Cocos nusifera</i>) and Rice (<i>Oryza sativa</i>) Husk and their Composite as Particulate Filtration for Diesel Automotive Exhaust	Ycremel Lee Losong, Jayden Maganes	Merda Joyce Talosig	BCNSHS
3	Utilization of Waste Pineapple (<i>Ananas Comosus</i>) Leaf Fibers as a Sustainable and Low-Cost Material for Thermal Sound Insulation	1.Ariane Apolpersh B. Danga 2.Arienne T. Moc-eg 3.Esther Imee P. Billao	Jerry L. Manogan	Guisad Valley National High School
4	Cymbopogan Citratus vs. Cymbopogan Nardus: A Comparative Analysis of their Potential as Hand Sanitizer	1.Rheanna Angel D. Gabitan 2.Marianne Lyn C. Mayes 3.Frexie P. Sales	Jerry L. Manogan	Guisad Valley National High School
5	<i>Curcuma longa</i> (Turmeric), <i>Daucus carota</i> (carrot), <i>Helianthus annuus</i> (Sunflower) leaves, <i>Coffea canephora</i> (Coffee), and <i>Selenicereus undatus</i> (Dragon fruit) as an alternative Source of Natural Paint	1. Safina P. Ignacio 2. Amaya Grail B. Wooden 3. Nelia A. Tupagen	Jerry L. Manogan	Guisad Valley National High School



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6	Potentiality of Carbon Sequestration of Ipil-Ipil(<i>Leucaena leucocephala</i>) Trees in Balenben Watershed, Irisan, Baguio City	CArmel S. Banania Lyra Jamila I. Domingo, Divine Grace C. Mangina	Charry Mar G. Mahusay	BCSNHS
7	Evaluating the Potential of Liberian Coffee(<i>Coffea liberica</i>) Grounds as Renewable REsources for Biodiesel: A Comparative Study Between Transesterification Methods	Aleana Ysobelle L. Quipse Faith I. Tabadero Gideon Amys P. Valerio	Lissa B. Roxas	BCSNHS
8	Testing the Effectivity of Golden Apple Snail(<i>Pomacea canaliculata</i>)Shells Reinforced with Potato(<i>solanum tuberosom</i>) Starch	Nathaniel B. Desierto Rhianna Alessandra P. Bayo Aaliyah Antonia T. Yere	Lissa B. Roxas	BCNSHS
10	Comparative Study on the Effectiveness of the Soil Management Strategies in Burnham Park and Camp John Hay based on Soil Fertility	1. Betenio, Lee Anderson T. 2. Dela Cruz, Althea C. 3. Estalilla, Justine Roczy A.	Joey B. Lartec	Baguio City High School
11	Comparative Effectiveness of Eggshells, Shellfish Waste, and Their Combination as Soil Neutralizers	1. Daquigan, Michelle M. 2. Itable, Marian 3. Navalta, Gabrielle Betina G.	Joey B. Lartec	Baguio City High School
12	Microplastic Concentration In Nile Tilapia (<i>Oreochromis Niloticus</i>) From Burnham Lake: A Comparative Analysis By Fish Size	1. Uyammi, Ashley S. 2. Declasen, Jame L. 3. Nacleo, Hezron B.	Joey B. Lartec	Baguio City High School
13	Evaluating the Mechanical Strength and Glycerol-Dependent Flexibility of Keratin-Infused Bioplastic Films	1. Andrei L. Asi 2. Zhack Gerald R. Montierro 3. Kyzer Angelo O. Valencia	Efren Matthew C. De Peralta	Baguio City High School
14	Feasibility Study of the Maximum Functional Height and Water Efficiency of a Pumpless Siphon-Driven Vertical Hydroponic System	1. Kass Leigh K. Sanchez 2. Michaela Jane B. Lubrin 3.	Efren Matthew C. De Peralta	Baguio City High School
15	Comparative Analysis on the Effects of Xylitol and Phosphoric Acid on the Rate of Enamel Erosion	1. Macalintal, Mayumi P. 2. Fontanilla, Cedric Ivan T. 3. Planas, Samantha V.	Joey B. Lartec	Baguio City High School
16	Evaluating the Phytoremediation Efficiency of Typha Latifolia L. in Reducing High Levels of Phosphorus in Contaminated Wetland Soil	1. Dicang, Jasmine V. 2. Arroy, Nash 3. Nimo, Louise	Joey B. Lartec	Baguio City High School
17	Open-Circuit Voltage of Dye-Sensitized Solar Cells Sensitized with Natural Dye from Maroon Chrysanthemum	1. Lomboy, Jhuncarl L. 2. Pobletin, Charvie M. 3. Tidor, Rochelle R.	Efren Matthew C. De Peralta	Baguio City High School



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18	Comparative Assessment of Waste Segregation among High School Students in Baguio City High School using Transparent and Opaque Bins	1. Ronquillo, Dzey J. 2. Santos, Gian Gabrielle A. 3. Tictic, Kean Angelo A.	Efren Matthew C. De Peralta	Baguio City High School
19	Evaluating the Effect of Reflector Distance on the Energy Output of Monocrystalline Solar Panels	1. Guinto, Psyllar G. 2. Villanueva, Kenrick B. 3. Solis, Krizza Mae C.	Efren Matthew C. De Peralta	Baguio City High School
21	Comparative Study on the Rate of Capillary Action of Magnetized Water in Mung Bean Seedlings	1. De Guzman, Jaydee M. 2. Linmayog, Sean Kurt B. 3. Perez, Yui Virgileigh M.	Efren Matthew C. De Peralta	Baguio City High School
22	Conducting the High Removal Efficiency of Activated Carbon Filtration System Through the Addition of ZIF-8	1. Ngappol, Jonas Jacob 2. Dela Cruz, Ellaisa Nicole 3. Padayhag, Jhenille Venice S.	Efren Matthew C. De Peralta	Baguio City High School

Robotics and Intelligent Machine-Team				
	Research Title	Proponents	Coach	School
1	Weight Monitoring System on Public Transport Vehicles to Prevent Overloading Using Load Cells	1. Ces Mica A. Bringas 2. Janelle Eve B. Pablo 3. Tyra R. Salango	Efren Matthew C. De Peralta	Baguio City High School
2	Smart Watering System for Vertical Farming Analyzing Time Efficiency of IOT-Integrated Vertical Farm	1. Rhaff Dave C. Dongael 2. Jc Daxz A. Mendoza 3. Jazmine Zave G. Dela Cruz	Efren Matthew C. De Peralta	Baguio City High School
3	TERRASCAN: Terrestrial Efficient with Real-time Automated Soil Compact with Advance Nutrient Yield Analyzer and Nitrate optimizer	1. Daisy G. Tarnate 2. Vanhertzel A. Bernabe 3. Rey Mark T. Navarro	Jerry L. Manogan	Guisad Valley National High School
4	Automating Energy Efficiency: An Arduino-Based Light and Temperature Control System	1. Giovanni Magboo 2. Leanna Calosa 3. Ashley Kate Cuyao	Odcar Joice Chavez	BCNSHS
5	SoPASS: Solar Power Automatic Sprinkler System: Real time Tracking device Soil Moisture and Automatic Water	1. Kyla Joyce T. Atas 2. Lea Lyn R. Lazara 3. Kezha Mae O. Segundo	Jerry L. Manogan	Guisad Valley National High School



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6	Traffic Eye: Cat's Eye Perspective into Smart Traffic Management Systems using Proximity Sensors	1. Leonel G. Diego 2. Jake Matthew L. Frias 3. Eriohn Zane T. Pagador	Jarred Lyle Ang	Guisad Valley National High School
7	FIRM-PURES (Fabric-based Infrared-sensor Robotic Mechanism for Purification Unit Removal and Environmental Safety)	1. Matthew W. Cutig 2. Lester K. Nebrida 3. Baruch M. Palogeg	Lissa B. Roxas	BCNSHS
8	LANDSLIDE GUARDIAN: A Landslide Sensing System	1. Edison Jr. R. Abubo 2. Alec Gaius L. Canigas 3. Clyden Berg T. Nuñez	Lissa B. Roxas	BCNSHS
9	High Speed Detection Alert System in Pedestrian Lanes for Accident Prevention	Ivanna Ciena V. Gumih-o Jovy Lyn T. Miranda Yuvraj M, Singh	Marina E. Apayo	Mil-an NHS
10	Improving Accuracy and Detection and Measurement Sensitivity of Vaping Monitoring Devices by Combining Image Sensor and Traditional Smoke Detector	1. Garcia, John Mark P. 2. Soriano, Miguel B. 3. Soriano, Quency Judy C.	Efren Matthew C. De Peralta	Baguio City High School
Mathematics and Computational Science-Team				
	Research Title	Proponents	Coach	School
1	Trends of the Past to Future Paths: Forecasting Tourist Arrivals in Baguio City Through ARIMA and ARIMAX Models	Hayden Bon I. Dulnuan Cedric Carlo N. Clemente	Jessica A. Yeban	Rizal National High School
2	Modelling and Optimizing Traffic Reduction in Baguio City Through Expanded Number Coding Scheme	Aeon L. Manalo Aerish Althea D. Oggang Jr R. Palma	Joel A. Hinay	Rizal National High School
3	Optimizing Jeepney Queue System: A Mathematical and Computational Approach to Standardized Efficiency Estimation	1. Beau Cedric Kyle B. Bilalay 2. Jhun Ronian D. Tacio 3. Kevin Donald Garnett B. Romano	Jerry L. Manogan	Guisad Valley National High School
4	Navigating Baguio: Assessing A Smart Mobility Solution	1. Eunuch Jeush C. Serrano 2. Karlyle Jjarajen T. Ciriaco 3. Mariane C. Dangatan	Cherry A. Capuyan	Baguio City High School
5	Short-term Time Series Analysis of the Air Quality of Baguio City High School, STEM Building: Focusing on Particulate Matter(PM2.5)	1. Galliguez, Matt Aeron S. 2. Mangili, Clinton D. 3. Hidalgo, Tiffany V.	Liza Y. Gabriel	Baguio City High School
6	Predicting Baguio City High School Canteen Food Waste With Daily Temperature: A Simple Linear Regression Model	1. Madongit, Jairuz D. 2. Gomez, Khrizsia Alexis H. 3. Ngayawon, Trisha Fe P.	Liza Y. Gabriel	Baguio City High School



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7	Assessing the use of the Logistic Growth Model in Predicting the Population Growth of Baguio City over the next five years	<ol style="list-style-type: none"> 1. Sibulo, Kiel Thyrelle F. 2. Ching, Cathlyn Jean R. 3. Quimao, Danielle Margarete S. 	Liza Y. Gabriel	Baguio City High School
8	Quantitative Analysis of Sex Difference in Mathematics Anxiety among Grade 11 HUMSS students in Baguio City High School	<ol style="list-style-type: none"> 1. Paguio, Aldous Ferdz B. 2. Reyes, Julius Caesar C. 3. Ramos, Julienne Carmel D. 	Liza Y. Gabriel	Baguio City High School
9	Spatial Analysis in Tree Distribution in Specific Location in Baguio City to Identify its Impact on Temperature	<ol style="list-style-type: none"> 1. Nonan, Frencille G. 2. Andrada, Princess Aryza C. 3. Padingil, Samantha T. 	Cherry A. Capuyan	Baguio City High School

Innovation-Team				
	Research Title	Proponents	Coach	School
1.	BIOWASTE TO ENERGY: PINE NEEDLES (<i>Pinus Kesiya</i>) FOR BRIQUETTE PRODUCTION	<ol style="list-style-type: none"> 1. Dorothy Joy S. Dicman 2. Chloe Zelene D. San Diego 3. Jahred O. Vince Cruz 	Lany S. Lalan	Mil-an National High School
2	Versatile ELECTRIC POWERED CART Out of Recycled Materials	<ol style="list-style-type: none"> 1. Darlene Izabelle N. Benter 2. Axel Sebastian W. Edyangan 	Dindo G. Umandam	Joaquin Smith National High School
3	PATHGUIDE: A Portable Assistive Tool for Hazard Guidance Using Information Detection and Electronic Alerts	<ol style="list-style-type: none"> 1. Regie D. Abiadew 2. Ruth K. Kinobong 3. Beverly C. Maximo 	Jerry L. Manogan	Guisad Valley National High School
4	Musa Auminata Leaves as an Alternative Paper Plate	<ol style="list-style-type: none"> 1. Krizle Fei T. Dalmones 2. Eunice Samantha B. Sotelo 3. Adrian B. Dogao 	Jerry L. Manogan	Guisad Valley National High School
5	Upcycling Carrot (<i>Daucus Coarta</i>) Surplus into Profitable Organic Soap: A Sustainable approach to Food Waste Reduction	<ol style="list-style-type: none"> 1. Israel E. Sopa 2. Lance Albert T. Bacdangan 3. Dazlynne Vaighn K. Madchawing 	Jerry L. Manogan	Guisad Valley National High School



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6	BioBriq Mechanism: Transforming Biowaste into Eco- Friendly Briquettes through Optimized Biowaste Physical Degradation For Sustainable Energy	1. John Rey Esmeralda 2. Jharenz Andrei C. Fermin 3. Justin Dwayne M. Ferrer	Jerry L. Manogan	Guisad Valley National High School
7	Tahong Shells (<i>Perna viridis</i>) as an Acid Neutralizer Incorporated in Filtration Systems	1. Zhen Anthony E. Abaggue 2. Nathan Cedric M. Ong	Lissa B. Roxas	BCNSHS
8	Exploring the Level of Acceptability of Dehydrate Lemon Tea Product Among Potential Customers	1. Jonatha Amoyong 2. Johan Bryle Arango 3. Carla Grace Magno		
9	Ecopine: Carbon Footprint Tracker for Education, Awareness and Environmental Sustainability in Baguio city	1. Aira Binwg 2. Jolly Armelle Dumulag 3. Cyril Jane Manait	Florence Truntich	BCNSHS
10	Spiwrix AI Mission: Carbon Footprint tracking Application for Reducing Daily Carbon Emissions	1. Jharizze Wynette Awingan 2. Xianne Charly Dampulay 3. Rohanne Gozales	Charry Mar Mahuay	BCNSHS
11	Tournameet: a Digital Platform Promoting Physical Health Through Organized Sports Competitions	1. Kurt Ivan Castro 2. Prince Andrei Osian 3. Baruch Palpeg	Florence Truntich	BCNSHS
	A Comparative Study of Low-Density Polyethylene Plastic Decomposition by Superworms (<i>Zophobas morio</i>) vs Mealworms (<i>Tenebrio molitor</i>)	1. Bergonia, Reeze Nian Atashea 2. Sy, Summer	Johnson Aquicio	Small World Christian School Foundation

A. Individual Category

Life Science-Individual				
	Research Title	Proponents	Coaches	School
1	Growth-Promoting Effects and NPK (Nitrogen, Phosphorus, Potassium) Analysis of Benguet Lichen (<i>Parmotrema reticulatum</i>)	Cabinto, Ralph Emmanuel B.	Johnny P. Buasen	Sto. Tomas National High School
2	Rediscovering Indigenous Baguio Beverages (Sabeng) for Sustainability: Antibacterial Activity of Kamote, Kalabasa and Strawberry Wine against <i>S. aureus</i> and <i>E. coli</i>	Shadrach Faith Komowang	Rufina D. Cadsí	BCNSHS
3	Evaluating the Antibacterial Activity of <i>Xerochrysum bracteatum</i> (Straw flower) Against <i>Staphylococcus aureus</i> and <i>Escherichia coli</i>	Alcantara, Dave Lawrence I.	Efren Matthew C. De Peralta	Baguio City High School

Physical Science-Individual



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	Research Title	Proponents	Coach	School
1	Walang Plastikan: Deriving Starch from Beach Spider Lily (<i>Hymenocallis littoralis</i>) for Bioplastic Production	Sophia Franchesca Louise L. Tupas	Rufina D. Cadsí	BCNSHS
2	Development of Bioplastic from Starch extracted from Jersey Lily (<i>Amaryllis Belladonna</i>)	Timothy Jan Jethro F. Odon	Rufina D. Cadsí	BCNSHS
3	LIMIUM: <i>Allium sativum</i> (Garlic), <i>Mentha piperata</i> (Mint), and <i>Curcubita pepo</i> (Pumpkin) Extracts as a Natural Insecticide Against Aphids	Ryllie Janelle R. Molina	Jerry L. Manogan	Guisad Valley National High School
4	Lila: <i>Musa paradisiaca</i> as a Natural Perfume Turning Discarded Plant Parts into Unique Sustainable Fragrance Products	Arjay Gave Ramos	Jerry L. Manogan	Guisad Valley National High School
5	Development of Biodegradable Packaging Utilizing Extracted Chayote (<i>Sechium edule</i>) Fibers and Potato (<i>Solanum tuberosum</i>) Starch	Frances Cyma B. Dalang	Jerry L. Manogan	Guisad Valley National High School
6	Quantifying Soil Carbon Stocks in Irisan, Baguio City, Philippines	Fatima Krishna C. Hadji All	Lissa B. Roxas	BCNSHS
7	Potatoes (<i>Solanum tuberosum</i>) as an Alternative Source of Floorwax	Etidorpha Suluj Suriban	Abegail Palcongán	UB-Science High

Robotics and Intelligent Machine-Individual

	Research Title	Proponents	Coach	School
1	RAIN MAKER: Robotic Ability to Inform Responders and Operate a Mechanism Ability to Kill off or Effectively Reduce Spreading Fires in Forest near Communities	Floyd Amber S. Aguilar	Jerry L. Manogan	Guisad Valley National High School



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Mathematics and Computational Science-Individual				
	Research Title	Proponents	Coach	School
1	Breathe, Baguio: Forecasting Air Quality (PM 10) in the City of Pines Using Hybrid SARIMA-GARCH Model	Cynara Aliyha C. Liano	Jessica A. Yeban	Rizal National High School
2	Predicting the Possible Prices of Highland Vegetables at the La Trinidad Benguet Trading Post: A Mathematical Method	John Nico Canlas	Jerry L. Manogan	Guisad Valley National High School
3	Forecasting Water Supply Through Mathematical Model Based on the Tree Count in Baguio City	Mishael Elisha C. Sy	Everly K. Ulban	Baguio City National Science High School
4	Comparing Machine Learning Algorithms in Predicting the Performance of Grade 11 STEM students of the School Year 2024-2025 in Baguio City High School	Tanagon, Joshua L.	Cherry A. Capuyan	Baguio City High School
5	Analyzing the Patterns of Baguio City High School's School-covered Water Consumption	Batnag, Aaron Joshua A.	Cherry A. Capuyan	Baguio City High School
6	Baguio Breakthrough: Optimizing the Shortest Routes to Parks in Baguio City Using the Bellman-Ford Algorithm	Bering, Jess Nathaniel	Liza Y. Gabriel	Baguio City High School
7	Area Under the Trajectorial Curve for Water Hoses in Projectile Motion for Combating Fires	Quitasol, Raquem John N.		Baguio City National Science High School



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Innovation-Individual-Gray				
	Research Title	Proponents	Coach	School
1	The Golden: Extracting Curcumin (Curcuma Longa) as Keys for Long Lasting Freshness using Leaching Method	Jemimh P. Oras	Jerry L. Manogan	Guisad Valley National High School
2	Physical and Mechanical Properties of Textile Derived from Pseudostem Fibers	Badriah Ayonan	Jerry L. Manogan	Guisad Valley National High School
3	Development and Acceptability of High-Fiber Crakers Utilizing Banana (Musa spp.) Pseudostem	Elisha Oddney L. Sabas	Jerry L. Manogan	Guisad Valley National High School
4	Project GASUL: Gas detector Kit with Arduino based on Solving Unpredictable Leakages and Explosions	Remp Rody P. Esteban	Jerry L. Manogan	Guisad Valley National High School
5	Pincoal-Charcoal Alternative Using Pine (Pinus kesiya) Needles	Solis, Julianne Ellice A.	Johnson M. Aquicio	Small World Christian School Foundation
6	THERMOELECTRIC TOASTER OVEN: The Conversion of Waste Heat into Electricity	Ian Grain L. Baysa-Pee	Johnson M. Aquicio	Small World Christian School Foundation