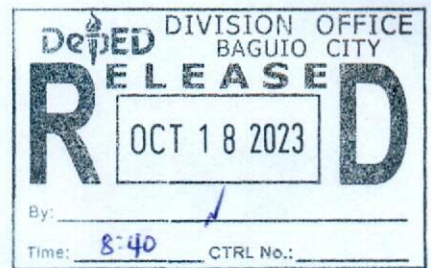




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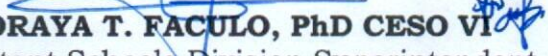
October 17, 2023

DIVISION MEMORANDUM
No. **425-2023**

**QUALIFIERS FOR THE 2023 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 qualifiers for the **2023 Division Science Festival** with the theme: **“Siyensa, Teknolohiya, at Inobasyon: Kabalikat sa Matatag, Maginhawa at Panatag na Kinabukasan”**, on October 21, 2023 at the Baguio City High School gym from 8:00AM to 5:00PM.
2. Kindly refer to the enclosures for the list of qualifiers, general procedures and guidelines.
3. Immediate and wide dissemination of this Memorandum is desired.


SORAYA T. FACULO, PhD CESO VI
Assistant Schools Division Superintendent
OIC- Office of the Schools Division Superintendent





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Enclosure 1. List of Qualifiers

A. Team Category

| a. Life Science-Team | | | | | |
|----------------------|---|--|--------|----------------------------|----------|
| | Research Title | Proponents | School | Adviser | Code |
| 1 | Determination of <i>Pinus kesiya</i> Corticolous Lichen diversity in Camp John Hay, Baguio City, Philippines | Barrozo, Kenzo B. Malecdan, Dorinda C. Balignasay, Sophia | SLU | John Michael A. Guerzon | LS-T-DO1 |
| 2 | Effectiveness of lemon grass (<i>Cymbopogon citratus</i>) and Oregano(<i>Oreganum vulgare</i>) as insect repellent lotion | Padsoyan, Jessica Khaté D., Bal-iwang, Ashly Winona B. Epad, Gemma W. | Pinsao | Lilia G. Mayapit | LS-T-DO2 |
| 3 | Harnessing the use of apple snail (<i>Pomacea canaliculate</i>) shell extract as anti-bacterial: A contribution to SDG 6 | Jamero, Gabriel Lao, Giancarlo Ongoco, David | UB | Thea P. Suaco | LS-T-DO3 |
| 4 | TA-DY Film: Taro (<i>Colocasia esculenta</i>) and lady finger (<i>Abelmoschus esculentus</i>) as bioplastic film | Awingan, Allyson Joye A. Bananal, Princess Lyka G. Decoyna, Aliyah Gem P. | GVNHS | Jerry Manogan | LS-T-DO4 |





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| 5 | Fungal properties of snake plant(<i>Dracena trifasciata</i>) leaves extract | Alberto, Arlee Garcia, Elaiza Charice Lansangan, Abegail | DANHS | Cynthia R. Recto | LS-T-DO5 |
| 6 | Antibacterial potential of <i>Selligieua taeniata</i> extract: A natural resource for combating bacterial infections | Salango, Trojan R. Samson, Allanson Y Gutierrez, Kyrosh C. | BCNHS | Efren Matthew C. De Peralta Joey B. Lartec | LS-T-DO6 |
| 7 | “Bisolak”(Embelia philippinensis as natural seasoning | Guinungo, Monica Eban, DARlyn Jade Kani, Katleen Joy M. | STNHS | Johny Buasen | LS-T-DO7 |
| 8 | Evaluating Benguet carrot(<i>Daucus carota</i>) seed essential oil as an antimicrobial agent | Puday, Josh Jaques M Baking, CARol Jane M. Fabella, Anne Therese | BCNHS | Efren Matthew C. De Peralta Joey B. Lartec | LS-T-DO8 |
| 9 | 2HW(Pulvurized Human Hair) as biofertilizer | Dolinta Hanameel Alill Solimen, Kyle | GVNHS | Gemma D. Yan | LS-T-DO9 |
| 10 | Lesser yam (<i>Dioscorea esculenta</i>) as an antimicrobial agent against <i>escherichia coli</i> and <i>Staphylococcus aureus</i> | Bayo, Dwayne T Abille, Rhian Imee C. Tenorio, Alveena Maxin D. | UB | Thea P. Suaco | LS-T-DO10 |
| 11 | Isolation of bacteria and evaluation of bacterial growth on different hand-drying techniques | Caranto, Precious Nicole D. Gualberto, Princess Danielle L. Dalindin, Aeon Rhayne Mari G. | SLU | John Michael A. Guerzon | LS-T-DO11 |





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| 12 | The effects of Fermented rice wine (Tapuy) on the morphology and morphometric of red blood cells | Valencia, Sophia Alessia Mari L. Batonan, Gifty B. De Los Santos, Angel Louise U. | UB | Thea P. Suaco | LS-T-DO12 |
| b. Physical Science-Team | | | | | |
| | Research Title | Proponents | School | Adviser | Code |
| 1 | The effectiveness of Utilizing activated graphite with saltwater for electricity generation | Lagmay, Lowen Cryle S Castellano, Rosse Margrette S. Yaos, Esther Asaph B | BCNHS | Alvin Noel D. Gayados Lakambine C. Pine | PS-T-DO1 |
| 2 | KALABA(Honeycomb) as bar lotion | Capulas, Kate Anne A. Lang-ay, Kezia Mae S. Alwing, Marimar P. | STNHS | Johnny D. Buasen | PS-T-DO2 |
| 3 | Improved weeding tool | Alicay, Chreleonne Ghraille Einra I. Gayaden, Raquele K. Macapagal, Sharmane B. | GVNHS | Jerry L. Manogan | PS-T-DO3 |
| 4 | From waste to energy: utilizing Saba banana(<i>Musa acuminata x Musa balbisiana</i>) peels and used coffee grounds for charcoal replacement | Lumadcao, John Corwin De Guzman, Ma. Ylisha Theresa L. | Magsaysa y | Jessica T. Corpuz | PS-T-DO4 |





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| 5 | Utilization and treatment of acidic mine wastewater by biosorption and bio-coagulant using coconut palm (<i>Cocus nucifera</i>) and bitter lemon (<i>Citrus aurantium</i>) | Na-oy, Zhairich Keith Dangarang, Azmon Kyle Lachica, Mariella | UB | Thea P. Suaco | PS-T-DO5 |
| 6 | Recyclable Piezoelectric Generator as a Noise Vibration Frequency converter to Electricity | Areola Micah Angelayne Areola Dalida, Leah Joy Tan, Rianni Elina | BCSNHS | Ariel N. Millare | PS-T-DO6 |
| 7 | Bio-absorption Potential of Sagada Orange Peel on lead-Contaminated Water | Abella, Helena Gricelle B. Guibac, Richard Jr W. De Guzman, Bernadine Mikaela C. | SLU | John Michael A. Guerzon | PS-T-DO7 |
| 8 | The effectiveness of Corn Husk(Zae mays) and Orange peels(Citrus aurantium dulcis) with different dosages as water flocculating agents for household use | Austria, Jeliane Micah A Daileg, Dolly Anne Rose B. Pido, Hannah Miel Marie C. | BCNHS | Viliu B. Buya Lheester Francis R. Manteo | PS-T-DO8 |
| 9 | Ecoboom: Automated sand-based fire extinguisher | Cayanan, Jhon Andrew Luis, Angel Rhaine Taruc, Kyle Jesryl | GVNHS | Jerry L. Manogan | PS-T-DO9 |
| 10 | Optimization of a mini hydroelectric power plant for emergency lighting through irrigation system integration | Casilan, Anzenio Jay Z. Fajardo, Sophia Yhaj U. | BCNHS | Viliu P. Buya Jessie G. Bueta | PS-T-DO10 |



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| 11 | ACE-T ³ (Affordable correction erasing tool-3 in 1) | Kiswa, Mika B. Alos, Jharine Delizo, Mary Ann Gonzales, Cyrel Jillian | GVNHS | Dale Andre M. Dicang | PS-T-DO11 |
| c. Robotics and Intelligent Machine-Team | | | | | |
| | Research Title | Proponents | Code | Adviser | Code |
| 1 | Effectivity of Utilizing Smart School Access and Attendance Management System using QR Code and Face Recognition | Obial, Kelly Rose B. Gam-ad, Nick Gabriel Q. Sagudin, Leonard L. | BCSNHS | Rufina D. Cadsi | RIM-T-DO1 |
| 2 | Revolutionizing energy Conservation "SHOCK": Intelligent Energy-Saving Device for Optimal Electricity Usage in School | Alberto, Irish G. Nantes, Davidoff A.Simpelo, Dayneil Louis Jeims | GVNHS | Dale Andre M. Dican | RIM-T-DO3 |
| d. Mathematics and Computational Science-Team | | | | | |
| | Research Title | Proponents | School | Adviser | Code |
| 1 | Efficiency evaluation of evacuation routes: a computational study at Guisad Valley NHS | Aliweng, Abdiel Clemart R. Cua-at, Nath Denniel G. Gabol, Nicole Alexie O. | GVNHS | Andre M. Dicang | MCS-T-DO1 |

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B. Individual Category

| a. Life Science-Individual | | | | | |
|--------------------------------|---|---------------------------------|--------|--|----------|
| | Research Title | Proponents | School | Adviser | Code |
| 1 | Antibacterial properties of fungal endophytes in <i>Solanum tuberosum</i> vr. <i>Igorota</i> | Gumanlaw, Erin Shane D. | SLU | John Michael A. Guerzon | LS-I-DO1 |
| 2 | Rose petal extract (<i>Rosa rubiginosa</i>), pure honey syrup, and aloe vera (<i>Aloe barbadensis miller</i>) feasibility as an alternative face mist | Ordinario, John Cyrus P. | GVNHS | Gemma D. Yan | LS-I-DO2 |
| 3 | Assessment of the Antioxidant capability of Benguet pine (<i>Pinus kesiya</i>) needle extract | Corsal, Jasper Kurt B. | BCNHS | Efren Matthew C. De Peralta Joey B. Lartec | LS-I-DO3 |
| 4 | Multiple shoot and leaf induction on <i>Stevia rebaudiana</i> through In-vitro plant tissue culture technique | Namoca, Lara Annika Paula E. | SLU | John Michael A. Guerzon | LS-I-DO4 |
| b. Physical Science-Individual | | | | | |
| | Research Title | Proponents | School | Adviser | Code |
| 1 | An improvised mop with solution dispenser for enhanced hygiene and sustainability | Binwag, Allyza Novalee | GVNHS | Dale Andre M. Dicang | PS-I-DO1 |
| 2 | CREWAFIP (Creek Water Filtration Project) | Lang-akan, Harris Dave B. | GVNHS | Rocky o. Solimen | PS-I-DO2 |





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| 3 | LDC Machine (Lift Drainage Cleaner Machine) | Dayday, Aislinn Jade G. | GVNHS | Dale Andre M. Dicang | PS-I-DO3 |
| 4 | Investigating the potential of small -scale hydroelectric power generators for Home Energy Needs | Somyden, Charmaine Jane P. | BCNHS | Alvin Noel D. Gayados Lakambine C. Pine | PS-I-DO4 |
| c. Robotics and Intelligent Machine-Individual | | | | | |
| | Research Title | Proponents | School | Coach | Code |
| 1 | Smart Density-Based Traffic Management System | Villaric, Jermaine | BCSNHS | Charlie Mae C. Dolipas | RIM-I-DO1 |
| 2 | NOAH'S ARK(Neo Tectonic Observation in Advanced Hazard and Landslide surveillance and Recording Kit) | Corales, Jaycee N. | GVNHS | Dale Andre M. Dicang | RIM-I-DO2 |
| d. Mathematics and Computational Science-Individual | | | | | |
| | Research Title | Proponents | School | Adviser | Code |
| 1 | Container: A Computational study on the packing potential of new generation Phillipine peso | Estigoy, Myrrh Lief G. | GVNHS | Jerry L. Manogan | MCS-I-DO1 |
| 2 | Machine Learning: Implement Machine Calculating and Programming Algorithms of Robot Control for Paths in Time of Service | Kian E. Orbino | BCHS | Cherry A. Capuyan | MCS-I-DO2 |





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Enclosure 2. General Procedures

A. SCIDAMA

1. Bring your own board and chips.
2. Register at the BCHS gym from 7:00 AM to 8:00 AM.
3. Proceed immediately to the designated venue.
4. The Tournament Manager will assign the TWG (who may be among the coaches) per grade level.
5. Only the TWG members are allowed to stay inside the room. Others are encouraged to attend the orientation on Preparing Science Investigatory Projects.

B. Tuklas: A Research Project Fair

1. Follow Display Board Format and Safety Guidelines as per Appendix 3 of the NSTF Guidebook.
2. Install your Display Boards at the BCHS gym from 3:00 to 5:00 PM on October 20, 2023. Make sure you have a copy of your manuscript with tags to identify revisions done based in the RRR.
3. Prepare a PowerPoint presentation (not more than 5 minutes) of your research for the Tuklas congress. Bring your own laptop for the presentation.
 - Title-Arial 36
 - Main bullets-28
4. Register at the BCHS gym from 8:00-8:30AM. Program starts at 9:00 AM.
5. Wear smart casual instead of school uniform.





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Enclosure 3. Technical Working Group

| SCIDAMA | | |
|---|--|---|
| In Charge | Terms of Reference | Outputs |
| Darwin Paas-JHS Emma Wakat- Elem | Manage the competition in all grade levels; Assign and orient TWG (arbiter, scorers, secretariat) per grade Level; Assist the arbiter per grade level when needed; Prepares the vneu and materials (score sheets, tally sheets, etc) needed for the competition; Prepare a report of the results of the competition; Others. Secretariat- Facilitate the registration and distribution of meals and snacks, accomplishing DTRs AMES & MLQES- to help in the physical arrangements (3PM, Oct 20, 2023) | Attendance Sheet Score Sheets Tally Sheets Summary of Results Photos (including meals and snacks) DTRs for COC |
| RESEARCH PROJECT FAIR | | |
| Marissa Wayan/Pauline Punasen- Marily D. Bugatti/Carolyn Viernes | Registration and Ushers-Life Science/Orientation of teacher Physical Arrangement including Board Display, Meals and snacks distribution Registration and Ushers-Physical Science-Team Physical Arrangement including Board Display, Meals and snacks distribution | Attendance Sheets Summary of Results Attendance sheets Summary of Results |
| Brenda Contada/Joy Abudda- | Display Board Label (Code) Registration and Ushers- PS-I, RIM, MCS Registration Templates, certificates, tally/evaluation/summary sheets DTRs for COC Meals and snacks distribution | Attendance Sheets Accomplished DTRs Summary of Results |
| Salome Fangkingan | SRC-Judge, documentation | Narrative Report |
| Russel Fitz P. Wadasen | SRC-Judge/emcee/facilitator Programme, invitation, tarpaulin, documentation PCNHS & SPED - to help in the physical arrangements (3PM, Oct 20, 2023) | Teacher participants oriented on Preparing SIPs; Winners recognized; Narrative Report |

