

Republic of the Philippines
Department of Education
 NATIONAL CAPITAL REGION

November 3, 2023

REGIONAL MEMORANDUM

ORD No. 1161 ,s. 2023

To: Schools Division Superintendents
 Functional Division Chiefs
 CID Chiefs
 Division Science and Math Supervisors
 All Others Concerned

2023 REGIONAL SCIENCE AND TECHNOLOGY FAIR (RSTF)

1. The Department of Education - National Capital Region through the Curriculum Learning and Management Division (CLMD), will conduct the **above captioned activity** with the theme **“Rebuilding Resilient Communities: Embracing Science and Technology for a Sustainable Future”** on **December 1 -2 ,2023** to be hosted by SDO Muntinlupa City.
2. This event integrates the cultivation of crucial research skills such as critical thinking, problem-solving, and the stimulation of innovation and creativity. These competencies not only propel academic success but also prepare the students for excellence in their future academic pursuits and careers. Likewise, it aims to identify the most creative/innovative and the best student research who will represent the region in the upcoming National Science and Technology Fair (NSTF) on March,2024.
3. The conduct of the school and division Science and Technology Fair (DSTF) shall be held in the following months:

Level	Date
School	September–October 2023
Division	October–November 15,2023

4. The official participants to the Regional Science and Technology Fair shall only be the Rank 1 of the Division Science and Technology Fair (DSTF) and Regional Science High School in each of the different categories and whose entries have been approved by the Scientific Review Committee (SRC). Substitutes shall not be allowed. The description and the maximum number of official participants are the following:



Address: Misamis St., Bago Bantay, Quezon City
Email address: ncr@deped.gov.ph
Website: depedncr.com.ph

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Maximum Number of Student Participants per Region	
Life Science Category (4)	
Individual	1
Team	Maximum of 3
Physical Science Category (4)	
Individual	1
Team	Maximum of 3
Robotics and Intelligent Machines Category (4)	
Individual	1
Team	Maximum of 3
Mathematics and Computational Science Category (4)	
Individual	1
Team	Maximum of 3
National Science Innovation Expo (4)	
Individual	1
Team	Maximum of 3
Total	20

5. Participants, trainers and Regional Technical Working Group shall be entitled to service credits in accordance with DepEd Order No. 53, s. 2003 entitled Updated Guidelines on the Grant of Vacation Service Credits to teachers. However, non - teaching personnel including Management Staff shall be given with Compensatory Time-Off (CTO) per Civil Service Commission (CSC) and Department of Budget and Management (DBM) Joint Circular No.2, s.2004 on Non-Monetary Remuneration for Overtime Service Rendered, specific attention on Section 5.

7. The Division Math and Science Supervisors are requested to submit and upload the report of the conduct of Division Science and Technology Fair as well as the Data of all the Science and Math research entries during the Division Fair in Excel using the format provided in enclosure No. 5 starting on **November 16, 2023, until 5PM of November 17,2023. Failure to submit the report on time shall disqualify the Division from the 2023 Regional Science and Technology Fair.**

5. Regional and Division Math and Science Supervisors or assigned Focal Persons under the Curriculum and Learning Management Division and/or the Curriculum Implementation Division shall lead the conduct of the school, division, and regional level Science and Technology Fair respectively.

7.1. The following documents are enclosed, for information and guidance of all concerned:

Enclosure No. 1-A	Official Delegates to RSTF 2023
Enclosure No. 1-B	Guidelines on the RSTF 2023
Enclosure No. 2	Schematic Diagram on the Flow of Activities
Enclosure No. 3	Timelines of Activities and Requirements
Enclosure No. 4	Working Committees
Enclosure No. 5	Format of the Data and Report
Enclosure No. 6	Scientific Review Committee (SRC) Form and Recommendation Report Form; and
Enclosure No. 7	BOJ Project Evaluation For



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7.2 Further, Division Math and Science Supervisors/ Coordinators, School Heads and participants are expected to download soft copies of the International Rules for Pre – college Science Research: Guidelines for Science and Engineering Fair 2024 and required forms. Resources can be accessed through this link:
<http://bit.ly/RSTFNCRForms>



8. The registration fee **for each Schools Division Office** and the **Regional Science High School** is **P5,000.00** in addition to the subsidy downloaded to the Region, and it shall be charged to the Division local funds, while the Regional Science High School shall charge it to their school local funds, subject to the usual accounting and auditing rules and regulations. This fee will cover the payment, transportation of the judges and necessary materials needed for the conduct of the Regional Science and Technology Fair (RSTF) 2023. Moreover, the registration fee shall be deposited to DepEd NCR account, and the validated deposit slip shall be submitted to the DepEd-NCR Cashier Unit on or before November 25, 2023

9. Immediate dissemination of this Memorandum is desired.


WILFREDO E. CABRAL, CESO III
Regional Director, DepEd NCR
Officer-in-Charge, Office of the Undersecretary
Human Resource and Organizational Development

Encls:

As stated

Reference:

DepEd Order 21,s.2019

To be indicated in the Perpetual Index

under the following subjects:

CELEBRATIONS AND FESTIVALS CONTESTS LEARNING AREA, Science SCHOOLS STUDENTS



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Enclosure No. 1-A Official Delegates to 2023 RSTF

A. If all projects are approved by the Regional Scientific Review Committee (RSRC), there shall be a maximum number of **30 official participants per division**. A total of 510 student-participants and coaches. Substitutes are not allowed. The description and maximum number of official participants are the following:

Description of Official participants per Division/ Regional Science HS	Maximum Number of Participants		TOTAL
	Participants	Coach	
Life Science Category			
Individual	1	1	2
Team	3	1	4
Physical Category			
Individual	1	1	2
Team	3	1	4
Robotics and Intelligent Machines Category			
Individual	1	1	2
Team	3	1	4
Mathematics and Computational Science Category			
Individual	1	1	2
Team	3	1	4
Science Innovation Expo (SIE)			
Individual	1	1	2
Team	3	1	4
TOTAL	20	10	30

The official participants to the 2023 Regional Science and Technology Fair shall only be the Rank 1 of the Division Science and Technology Fair (DSTF) and Regional Science High School in each of the different categories and whose entries have been approved by the Scientific Review Committee (SRC).

Enclosure No. 1-B Guidelines on the 2023 RSTF

GUIDELINES ON THE 2023 REGIONAL SCIENCE AND TECHNOLOGY FAIR (RSTF)

The 2023 Regional Science and Technology Fair (RSTF) is in line with the National Science and Technology Fair which is an ISEF-affiliated fair. As such, the requirements for affiliated fairs should be met and followed as stated in the ISEF 2024 guidelines.

1. The Research Competition

The research competitions will be conducted among **Grade 9 to Grade 12** learners from both public and private schools. The **first-place winners in each of the categories at the DIVISION level** shall represent the SDO to the Regional STF competition as approved by the Regional Scientific Review Committee (SRC).

The competition will start at the school level advancing to the division, regional, national, then to the international level. Regional Science High School (RSHS) are expected to join the regional fair directly. RSHS may submit only one entry per category and these entries must be approved by the Regional Scientific Review Committee (SRC). The participation of schools in the 2023 RSTF shall be clustered into five major categories: Life Science, Physical Science, Robotics and Intelligent Machines, Mathematics and Computational Science, Science Innovation Expo.

Life Science (LS)		Physical Science (PS)		Robotics and Intelligent Machines (RIM)		Mathematics and Computational Science		Science Innovation Expo	
Individual Project	Team Project	Individual Project	Team Project	Individual Project	Team Project	Individual Project	Team Project	Individual Project	Team Project

Life Science

This category deals with living organisms such as plants, microorganisms, and animals including humans and their life processes. Projects that involve systematic observation, development, experimentation, and understanding of living things and biological processes belong to this category. Subcategories include Animal Sciences, Biomedical and Health Sciences, Cellular and Molecular Biology, Microbiology, Plant Sciences, and Translational Medical Science.

Physical Science

This category deals with the nature and properties of non-living matter, energy and systems. Projects that involve systematic observation, development, experimentation, and understanding of materials and phenomena belong to this category. Subcategories include Astronomy, Chemistry, Earth and Environmental Sciences, Energy, Engineering Technology, Statics and Dynamics, Sustainable Materials and Design, Environmental Engineering, Materials Science, and Physics.

Robotics and Intelligent Machines

This category deals with the design, implementation, and use of prime technologies and machine intelligence in providing a wide range of innovative solutions and advancements across multiple disciplines to reduce reliance on human intervention. Subcategories include Biomechanics, Cognitive Systems, Control Theory, Machine Learning, and Robot Kinematics.

Mathematics and Computational Sciences

Mathematics deals with the measurement, properties, and relationships of quantities and sets using numbers and symbols. Subcategories include Algebra, Analysis, Combinatorics, Graph Theory, Game Theory, Geometry and Topology, Number Theory, and Probability and Statistics.

Computational Science deals with the development and implementation of mathematical models and simulations to understand natural systems and processes and solve STEM problems using computers. Subcategories include Computational Biology and Bioinformatics, Computational Chemistry, Computational Mechanics, and Theoretical, Computational and Quantum Physics.

Science Innovation Expo (Gawad AgLiTekno)

A Technology Innovation competition which aims to recognize the most creative and market viable project addressing major issues in food safety, water conservation, renewable energy, cyber security, road safety, health, disaster mitigation, agriculture, and environment.

UPDATED CHECKPOINTS FOR SRC REVIEW

Source: Society for Science and the Public

Checklist for SRC Review

This document was developed to provide guidance for an SRC to review a project after experimentation.

TYPE OF FORM	WHO WILL FILL OUT?	WHEN TO FILL OUT?	WHEN IS IT REQUIRED?
Form 1 - Checklist for Adult Sponsor	Research Adviser	Before experimentation	Required for all Projects
Form 1A - Student Checklist	All student researchers	Before experimentation	Required for all Projects
Form 1B - Approval Form	All student researchers	Before experimentation	Required for all Projects
Research Plan/Project Summary	All student researchers	Before experimentation	Required for all Projects
Form 1C - Regulated Research Institution/ Industrial Setting Form	Adult supervising	After experimentation	Required if research is conducted in a regulated research institution, industrial setting or any work site other than home, school or field
Form 2 - Qualified Scientist Form	Qualified Scientist/ Adult Supervising	Before experimentation	Required if research involves human participants, vertebrate animals, potentially hazardous biological agents and hazardous

Form 3 – Risk Assessment Form	Student Researcher/s Qualified Scientist/ Adult Supervising	Before experimentation	Required for all Projects
Form 4 – Human Participants Form	Student Researcher/s Institutional Review Board	Before experimentation	Required if research involves human participant <i>*if in a regulated research institution use institutional approval forms</i>
Form 4A – Human Informed Consent Form	Student Researcher/s Research Participant	Before experimentation	Required if research involves human participant
Form 5A – Vertebrate Animal Form	Student Researcher/s Scientific Review Committee Veterinarian Designated Supervisor/Qualified Scientist	Before experimentation	Required for all research involving vertebrate animals that is conducted in a school/home/field research site

Form 5B – Vertebrate Animal Form	Student Researcher/s Qualified Scientist	Before experimentation	Required for all research involving vertebrate animals that is conducted in Regulated Research Institution
Form 6A – Potentially Hazardous Biological Agents Risk Assessment Form	Student Researcher Qualified Scientist/Designated Supervisor Scientific Review Committee	Before experimentation	Required for research involving microorganisms, rDNA, fresh/frozen tissue(including primary cell lines, human and other primate established cell lines and tissue cultures), blood, blood products, and body fluids.

Form 6B – Human and Vertebrate Animal Tissue	Student Researcher Qualified Scientist/Designated Supervisor	Before experimentation	Required for research involving fresh/frozen tissue (including primary cell lines, human and other primate established cell lines and tissue cultures), blood, blood products and body fluids. If the research involves living organisms, please ensure that the proper human or animal forms are completed.
Form 7 – Continuation/ Research Progression Projects Form	Student Researcher	Before experimentation	Required for projects that are a continuation/ progression in the same field of study as previous project.

Forms needed and Manuscript for Research Competition

The following are the forms and manuscripts to be submitted in all levels of the competition:

1. SRC Form (See Enclosure No.6)
 - Regional SRC FORM (Blank Form)
 - Division SRC FORM (Accomplished for by the SRC with signature)
 - School SRC FORM (Accomplished for by the SRC with signature)
2. Plagiarism Check Result
3. RESEARCH PLAN
4. FORMS for all the projects
 - A. Checklist for Adult Sponsors
 - B. Student Checklist (1A)
Research Plan (NOTE: No need to attach the Research Plan Instruction)
 - C. Approval Form (1B)
 - D. Regulated Research Institutional/ Industrial Setting Form (IC)
5. FORMS depending on the type of research (e.g. involving human, vertebrae animals, hazardous chemicals, etc.)
 - A. Qualified Scientist Form (2)
 - B. Risk Assessment Form (3)
 - C. Human Participants Form (4)
 - D. Human Informed Consent Form
 - E. Vertebrae Animal Form (5A)
 - F. Vertebrae Animal Form (5B)
 - G. Potentially hazardous Biological Agents Risk Assessment Form (6A)
 - H. Human and Vertebrae Animal Tissue Form (6B)
 - I. Continuation Project Form (7)
6. Abstract (Maximum of 250 words)

The abstract should include the following:

 - A. Purpose of the experiment
 - B. Procedure
 - C. Data Conclusion

The abstract may NOT include the following:

 - A. Acknowledgement
 - B. Work of procedures done by the mentor.
7. Research Paper (Include the Title Page, Abstract, Main Body, and References)
8. Project Evaluation Form (see Enclosure No.7)
 - Project Evaluation Form Regional Level (Blank Form)
 - Project Evaluation Form Division Level (accomplished with signature of the judges)
 - Project Evaluation Form School Level (accomplished with signature of the judges)
9. Copy of logbook
10. Copy of plagiarism scan report

For Innovation Projects (SIE-I and T)

The following forms are required:

- a. Innovation Paper
- b. Innovation Expo Screening Form
- c. Innovation Expo Judges Form
- d. Plagiarism Scan Report
- e. Logbook

1.5 The Research Projects

Science research projects must conform to international rules and standards published by the Society for Science and the Public, the International Rules for Pre-college Science Research: Guidelines for Science and Engineering Fair 2024. Each project is expected to have a Research Adviser and an Institutional Review Board (IRB) or a Scientific Review Committee (SRC).

The research project should cover a maximum of twelve (12) continuous months from January 2023 to December 2023.

Ethics Statement. Scientific fraud and misconduct are not condoned at any level of research or competition. Plagiarism, use or presentation of other research's work as one's own and fabrication of data will not be tolerated. Fraudulent projects are disqualified from the competition.

1.6 Display and Safety Regulations

The project display using photo paper summarizes the research project and must focus on the proponent's work for this year's study, and if applicable, with only minimal reference to previous research. Tarpaulins will not be used in the RSTF in support of the environmental advocacy of the government in reducing the consumption of non-biodegradable or non-recyclable materials.

The safety regulations that must adhere to or should be consistent with the guidelines set by the International Science and Engineering Fair (ISEF) 2024.

The following items should be seen in the project display: Abstract, Background, Objectives, Significance, Methodology, Results and Discussion, Conclusion, Recommendations, Bibliography and if applicable, Photo Credits (including illustrations and graphics)

Photography/Images:

Display of photographs other than that of the learner/s MUST have a photo release signed by the subject, and if under 18, also by the guardian of the subject. Any photographs, visual image, chart, table and/or graph is allowed if:

1. It is not deemed offensive or inappropriate (which included images/photos showing vertebrate animals/ humans in surgical, necrotizing or dissection situations) by the SRC, Display & Safety Committee.
2. It has a credit line of origin.

3. If it is from the Internet, magazine, newspaper, journal, etc. and a credit line is attached.
4. It is a photograph or visual depiction of the finalist.
5. It is a photograph or visual depiction for which a signed consent form is at the project.
6. Images used as backgrounds must also be credited.

ITEMS NOT ALLOWED TO BE DISPLAYED WITH THE PROJECT:

1. Awards, medals, business cards, flags, logos, CDs, DVDs, flash drives, brochures, booklets, endorsements, giveaway items and/or acknowledgements (graphic or written) unless the item(s) are an integral part of the project.
2. Postal addresses, Internet, email, and/or social media addresses, QR codes, telephone, and/or fax numbers of a student.
3. Active internet or email connections as part of the display or operating the project.

Items NOT Allowed at the Project Display:

1. Living organisms, including plants
2. Soil, sand, rock, and/or waste samples, even if permanently encased in acrylic
3. Taxidermy specimens or parts
4. Preserved vertebrate or invertebrate animals.
5. Human or animal food
6. Human or animal parts or body fluids
7. Plant materials (living, dead or preserved) that are in their raw, unprocessed or non-manufactured state (Exception: manufactured construction materials used in building the project or display)
8. All chemicals including water.
9. All hazardous substances or devices (i.e.: poisons, drugs, firearms, weapons, ammunition, reloading devices, lasers, etc.)
10. Dry ice or other sublimating solids Sharp items (i.e.: syringes, needles, pipettes, knives,
11. Flames or highly flammable materials
12. Batteries with open-top cells
13. Glass or glass objects unless deemed by the Display & Safety Committee to be an integral and necessary part of the project.
14. Lasers or laser pointers Any apparatus deemed unsafe by the Scientific Review Committee, the Display & Safety Committee of the Fair

Physical Project Board Dimension:

The dimensions of the project board may not exceed 2.5 m high and 1m wide.



Requirements for presentation by the Project Proponent/s to the BOJ during the exhibit are the following:

- Copy of the required forms
- Copy of the research write-up
- Project data book or student journal complete with dates of entry, number of pages, and all other details

Innovation Expo Board Display:

Title	Create a clear and attention-grabbing title that accurately reflects your innovation.
Introduction	Provide a brief introduction to your innovation, highlighting its purpose and significance.
Problem Statement	Clearly state the problem or challenge that your innovation addresses.
Solution/Innovation	Describe your innovative solution concisely and prominently on the poster.
Features and Specifications	Present the key features and specifications of your innovation using bullet points or visuals.
Materials and Methods	Use simple visuals or graphics to illustrate the materials used and the steps in the development process.
Results and Discussion	Showcase the results of your innovation and compare them to expectations or existing solutions. Use graphs, charts, or infographics to present data effectively.
Benefits	Emphasize the potential benefits of your innovation to the target users or the community.
Visuals	Include images, diagrams, and photographs to enhance the visual appeal and understanding of your innovation.
Conclusions	Summarize the main conclusions and the broader implications of your innovation.
Future Development	Discuss potential future developments or applications of your innovation.
Developers' Name	Indicate the name/s of the proponent/s (Do not indicate the name of the school/region)

Specifications: Each Display Board must have a 38" x 48" dimensions (portrait style)

1.7 The Regional Level

Projects of proponent should have been screened by the Institutional Review Board (IRB)/ SRC at the school level. All **school level winners** must be certified by the **Division SRC** to join in the division-level fair. The **Division Board of Judges** shall determine the division winners of the different categories. **With the exception of Regional Science High Schools**, students of both regular and science high schools of private and public high schools shall participate in the Division Science and Technology Fair.

Winners at the school level should be officially endorsed to the division office for the division-level. Likewise, the division-level winners should be officially endorsed to the regional office. **The official list of the first-place winners at the division level shall be officially endorsed by the Division Office to DepEd NCR through the CLMD.**

The first-place winners at the division level in each categories shall be properly scrutinized by identified members of the SRC for the regional level competition.

Example:

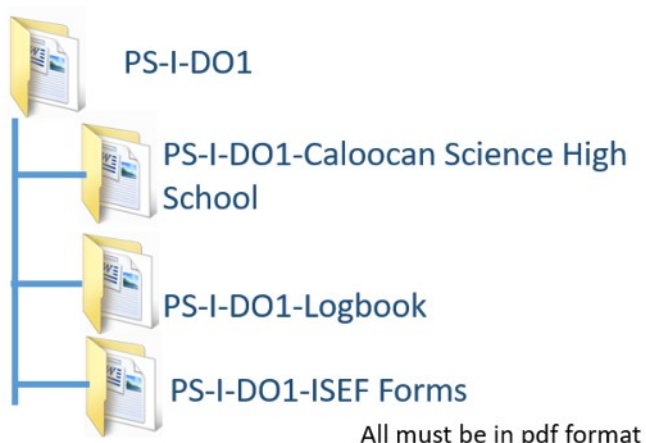


RS-T/I-DO17

RIM/LS/PS/SIE	Category RIM- Robotics and Intelligent Machine LS- Life Science PS- Physical Science SIE- Science Innovation Expo
T/I	Team or Individual
DO	Division Office
1-17	Division Code

Division Code	Division	Division Code	Division
1	Caloocan City	9	Navotas City
2	Las Pinas City	10	Paranaque City
3	Makati City	11	Pasay City
4	Malabon City	12	Pasig City
5	Mandaluyong City	13	Quezon City
6	Manila City	14	San Juan City
7	Marikina City	15	Taguig City and Pateros
8	Muntinlupa City	16	Valenzuela City

	17	Regional science HS Quezon City Science HS
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All must be in pdf format

CODES	COLOR CODING
LS-I	GREEN
LS-T	YELLOW
PS-I	BLUE
PS-T	ORANGE
RIM-I	PINK
RIM-T	BROWN
MCS-I	RED
MCS-T	PURPLE

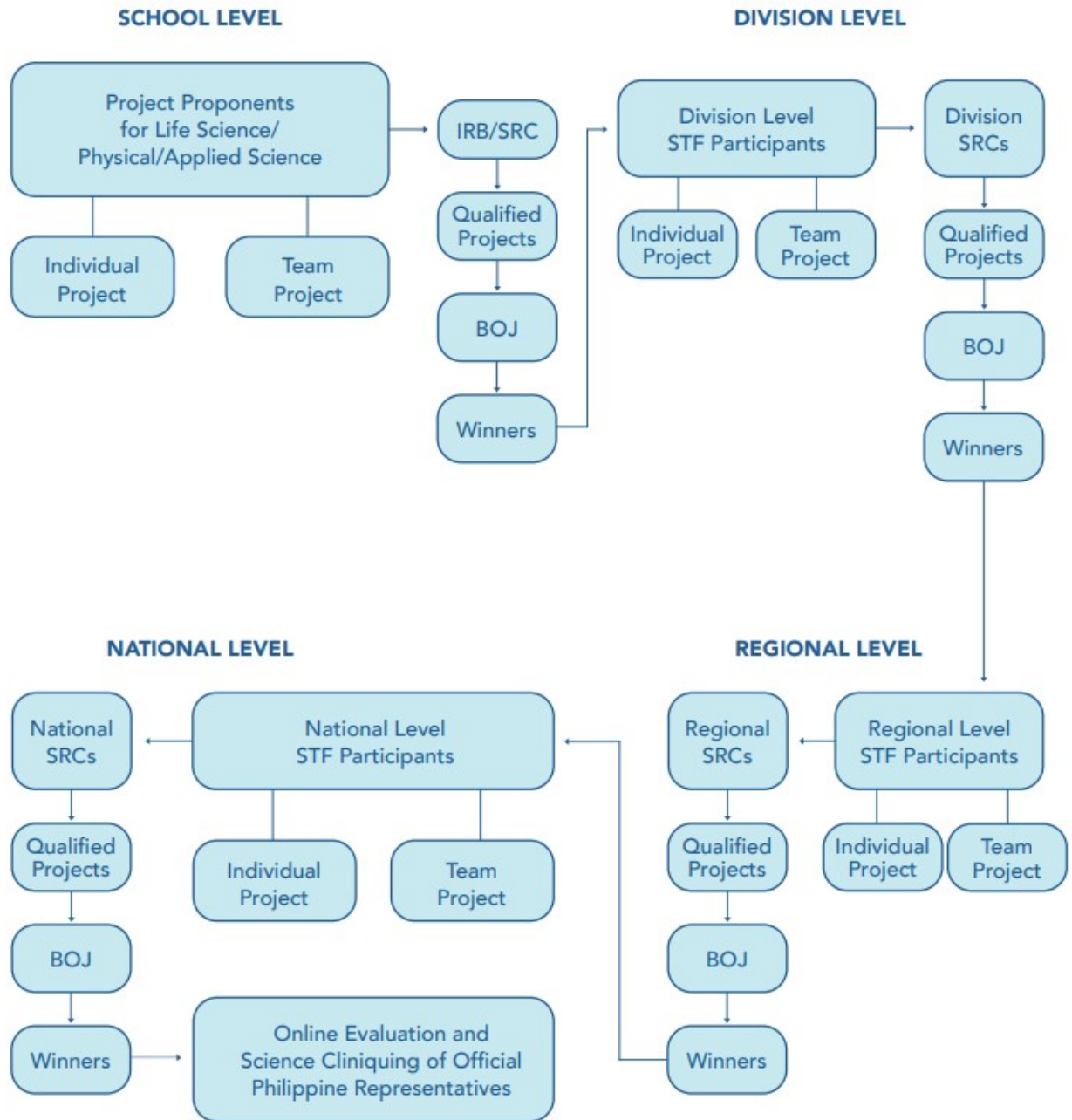
Awards and Recognition

A. Special Awards	Descriptions
<ul style="list-style-type: none"> Best Shout Out 	Best shout out should portray creativity, clarity of the hash tags or message, coherency of the music or lyrics to the message or actions and organization as shown from the submitted 1 - minute video and actual presentation.
<ul style="list-style-type: none"> Best Poster 	Poster will be evaluated based on the content (identity of the division through culture, practices or landmark), creativity,


	design presentation, originality and relevance to the theme.
<ul style="list-style-type: none"> • Best Presenter 	Best presenter should have a clear audible speaking voice, research focus, has an in depth understanding of the research topic and high scientific reasoning and stage presence
<ul style="list-style-type: none"> • Best Display Board 	Best display boards will be evaluated based on the design, layout, dimension and content as set in the standard for the display board, organization and clarity
<ul style="list-style-type: none"> • People’s Choice 	The top three study/ group with the highest number of votes from the viewing public
<ul style="list-style-type: none"> • Lourdes Choice Award 	This award will be chosen by Lourdes Hospital based on their criteria in relation to health science.
B. Best Projects	
<ul style="list-style-type: none"> • Top 5 Best Projects for each category will be awarded 	The five best projects: First (Gold), Second (Silver), Third (Bronze), Fourth and Fifth (Certificate) for each category
<ul style="list-style-type: none"> • The First-Place winner/s will represent the region in the NSTF in each category if approved by the National SRC 	<ul style="list-style-type: none"> • Life Science (INDIVIDUAL) • Life Science (TEAM) • Physical Science (INDIVIDUAL) • Physical Science (TEAM) • Robotics and Intelligent Machine (INDIVIDUAL) • Robotics and Intelligent Machine (Team) • Mathematics and Computational Science (INDIVIDUAL) • Mathematics and Computational Science (TEAM) • Science Innovation Expo (INDIVIDUAL) • Science Innovation Expo (TEAM)

Furthermore, the results of the deliberation of the Regional SRC’s and the Regional Board of Judges will be **final and irrevocable**.

Enclosure No. 2 Schematic Diagram and Flow of Activities



Enclosure No. 3 Timelines of Activities and Requirements

DATE	ACTIVITIES	PERSONS INVOLVED
November 16-17, 2023	<p>Submission of the:</p> <p>Report of the Conduct of Division Science and Technology Fair (see the format in Enclosure 5)</p> <p>Indorsement of the List of Division Winners</p> <p>Soft copy (Excel Form) of the Data of SIPs submitted during the Division Science and Technology Fair (see the format in Enclosure 5) send it to NCR Science Supervisors Group</p> <p>https://bit.ly/DSTFAccomplishment</p>	Division Science and Math Supervisors/ Coordinators
November 18, 2023 (Saturday)	<p>Online submission of SDO's official entries:</p> <p>Submit the following per entry following the file name format given on Enclosure 1B.</p> <p>https://forms.office.com/r/Vr8Z2tztd7</p> <p>This form shall be accessible from November 18, 2023 – 7:00 AM to 5:00 PM ONLY.</p> <div data-bbox="555 1451 1070 1966" style="text-align: center; background-color: #008080; color: white; padding: 10px;"> <p>REGIONAL SCIENCE AND TECHNOLOGY FAIR 2023</p>  </div>	

	Use your Office 365 account to upload files.	
	Online registration of the regional qualifiers shall be done using the link below: https://forms.gle/6e6cLedgHzRvZw378	Research Advisers SDOs first place winners and Regional Science HS first place winners in the different categories
November 19-23,2023	Submission of the SIP to the respective Judges via google drive (Note that the judges must be provided and affix their signature in the Non-Disclosure Agreement) Screening and checking of required forms for the regional qualifiers. Forms and manuscripts of the division first place winners in each category will be uploaded in the google drive following the format given in enclosure 1-B	Regional and Division Math and Science Supervisors Select Research advisers Screening Committee
November 26,2023 (Sunday)	Regional SRC at the CLMD Office	Screening Committee and Judges
November 27,2023	Giving of the comments from the SRC to the concerned SDOs	SUPERVISORS/ Coordinator Officers of the Regional Research Advisers Association RESEARCH ADVISERS
Nov. 28, 2023	Ocular Inspection Final Meeting at SDO Muntinlupa City	SCIENCE SUPERVISORS Officers of the Regional Research Advisers Association

December 1, 2023	<p>Setting Up for the Fair</p> <ul style="list-style-type: none"> • <i>Submission of HARD COPY incorporating the revisions from the SRC</i> • <i>Quality assurance of project</i> • <i>Submission of shout out video</i> • <i>Making science fair poster</i> • <i>Setting the DISPLAY BOARD</i> <p>Note: Submission is from 8:00 Am to 12:00 PM ONLY 1PM Briefing for all participants</p>	<p>Science Supervisors Officers of the Regional Research Advisers Regional Science Club Officers Research Advisers HOST DIVISION</p>
December 2,2023	<p><i>Opening of the RSTF</i> <i>Judging</i></p> <ul style="list-style-type: none"> • <i>On site interview</i> • <i>Oral defense</i> <p><i>-Audience participation during the presentation is allowed but with rules to be followed and maximum number of audience will be determined</i></p> <ul style="list-style-type: none"> - <i>There should be a documenter, timekeeper, emcee and crowd controller in each defense area</i> - <i>All documents must be submitted to the secretariat.</i> <p>Viewing/ STEM Educators Academy</p> <p>Awarding</p>	<p>Science Supervisors Officers of the Regional Research Advisers Regional Science Club Officers Research Advisers HOST DIVISION</p>
December -4-9,2023	Mentoring of the Regional winners	<p>Science and Math Supervisors Research Advisers Science Supervisors Judges</p>
December 12,2023	Submission of Final research output	<p>Science and Math Supervisors Research Advisers Science Supervisors Judges</p>

Enclosure No.4 WORKING COMMITTEES

Working Committees	CLMD EPSs and Staff, Regional and Division Math and Science Supervisors/ Coordinators will be assisted by Regional Research Advisers Association Officers
Accommodation/ Program/ Food/ Invitation/ Documentation	SDO Muntinlupa City HOST DIVISION
Registration	SDO Muntinlupa City HOST DIVISION
Awards (Certificates, Medals, Trophies & Trophies)	SDO Muntinlupa City HOST DIVISION
Display	Dr. Manolo Davantes SDO- Malabon City and the Display Board Team
Poster Making Contest	Math and Science Supervisors Regional Research Advisers Association Officers
Shout Out	Math and Science Supervisors Regional Research Advisers Association Officers
Viewing	Dr. Armida Oblinada SDO Muntinlupa City
In-Charge of Different Contest Category <ul style="list-style-type: none"> • Life Science (Individual) • Life Science (Team) • Physical Science (Individual) 	<p>Dr. Bradley Goldie Loo SDO San Juan City Dr. Emiterio Macarrubo SDO Caloocan City Regional Research Advisers Association Officer</p> <p>Dr. Maria Pilar Capalongan SDO Quezon City Dr. Lea Prondo SDO Valenzuela City Regional Research Advisers Association Officer</p> <p>Ms. Liza Alvarez SDO Pasig Ms. Laprizal Castueras SDO Las Piñas City</p>

<ul style="list-style-type: none"> • Physical Science (Team) • Robotics (Individual) • Robotics (Team) 	<p>Regional Research Advisers Association Officer Dr. Corazon Javier SDO Paranaque City Ms. Merie Gerlie Capiral SDO Manila Regional Research Advisers Association Officer</p> <p>Dr. Marivic Almo SDO Taguig City and Pateros Dr. Maripaz Mendoza SDO Pasay City Regional Research Advisers Association Officer</p> <p>Ms. Roxane Villanueva SDO Mandaluyong City Ms. Jessica Mateo SDO Marikina City Regional Research Advisers Association Officer</p>
<p>Mathematics and Computational Science (Individual and Team)</p>	<p>Ms. Bernadeth Daran Mr. Lambert Quesada, SDO Muntinlupa City Dr. Evelyn Callada, SDO Malabon City Mr. Restituto Rodelas, SDO Mandaluyong City Mr. Michael Lee, SDO Makati City Dr. Alberto Tiangco, SDO Navotas City</p>
<ul style="list-style-type: none"> • Science Innovations Expo Individual • Science Innovation Expo Team 	<p>Mrs. Jocelyn Agulto SDO Navotas City</p> <p>Mr. Hernan Apurada SDO Makati City</p>

Regional Research Advisers Association Members Core Team

- Don King O. Evangelista, SDO Navotas
- Ayra Patricia Alvero, SDO Las Pinas
- Diana Lou Sipalay, SDO Caloocan
- Ephraim Villacrusis, SDO Pasig
- Janeth Mamansag, SDO Taguig Pateros
- Earl Merilles, SDO Quezon City
- Kathleen Ladines, SDO Paranaque

Enclosure No.5 FORMAT OF THE REPORT AND DATA SUBMISSION

The Division Science Supervisors/Coordinators are requested to submit to Curriculum and Learning Management Division (CLMD) the reports of the conduct of Division Science and Technology Fair on or before November 16, 2023.

The Report of the **Conduct of the Division Science and Technology Fair** shall include the following:

1. Title
2. Table of Contents
3. Introduction/Rationale
4. Detailed Information
 - General information
 - SRC Deliberation (include the results, findings and recommendations)
 - Program of Activities (day-to-day activities)
 - List of Entries (include a brief profile of the research adviser of each entry)
 - List of Winners (Research & Innovation Congress)
 - Trend Analysis (results from 3 consecutive years)
 - Financial Report
5. Conclusions
6. Recommendations
7. Appendix

Format for End of Activity Report

The End of Activity Report for the Regional/Division/School Science and Technology Fair should contain the following sections:

1. Title Page: Include the name of the region/division and a clear, concise title for the report.
2. Table of Contents: List all the sections of the report and their corresponding page numbers to help readers navigate the document.
3. General Information: Provide a broad overview of the fair, including its purpose, goals, and objectives, as well as information on its structure, participants, and timeline.
4. Results: Present the results of the fair, including statistics and data related to the number of entries, participants, and winners, as well as any trends or patterns observed.
5. List of Activities Conducted: Provide a detailed list of the activities conducted during the fair, including dates, locations, and participants.
6. List of Entries: Provide a list of all entries submitted to the fair, including the title, author, and category.
7. List of Winners: List the winners of the fair, including the title, author, and category.
8. Financial Report: Provide a detailed financial report of the fair, including expenditures and income, as well as any funding sources.
9. Conclusions: Summarize the main findings and conclusions of the fair, and provide recommendations for future action.
10. Recommendations: Provide specific recommendations for future action, based on the findings of the fair, and identify areas for improvement.
11. Appendix: Include any additional materials, such as detailed data tables, charts, or other relevant documents, that support the findings of the report

Data	Total	Data	
Total No. of Female		Total No. of Robotics and Intelligent Machines Project Entries	
Total No. of Male		Total No. of Mathematics and Computer Sciences Project Entries	
Total No. of Participating Schools		Total No. of Grade 7 Student Participants	
Total No. of Participating Private Schools		Total No. of Grade 8 Student Participants	
Total No. of Participating SP STEM Schools		Total No. of Grade 9 Student Participants	
Total No. of Participating SP STEM Male Student		Total No. of Grade 10 Student Participants	
Total No. of Participating SP STEM Female Student		Total No. of Grade 11 Student Participants	
Total No. of Individual Project Entries		Total No. of Grade 12 Student Participants	
Total No. of Team Project Entries		Total No. of Mathematics and Computer Sciences Project Entries	
Total No. of Life Sciences Project Entries		Total No. of Participating Teachers	
Total No. of Physical Sciences Project Entries			

Prepared by: _____
 Mobile No: _____
 School/Office Address: _____
 Regional Coordinator: _____

Scientific Review Committee Review & Recommendation Report

PLEASE CHECK
 REGIONAL SCIENCE AND TECHNOLOGY FAIR 2023
 DIVISION SCIENCE AND TECHNOLOGY FAIR 2023

SCHOOL SCIENCE AND TECHNOLOGY FAIR 2023

Project Title:

Fair Division: Life Applied/Physical Robotics and Intelligent Machine M
 Category: Individual Team

Instruction: Please put a check [✓] in the appropriate column and if necessary, write recommendation

PART 1: REQUIRED FORMS FOR ALL RESEARCHES	Complete	Incomplete	Recommendations
1. Checklist for Adult Sponsor (1). Is it accomplished and signed?			
2. Student Checklist 1A. Is it accomplished and signed			
If answer to item 5 is YES, must also have Form 7 (See Part II, item 13 below)			
If answer to item 7 is Research Institution or Other, must also have Form IC (See Part II, item 6)			
3. Research Plan (Attachment to item 2, above). Does it include the following:			
A. RATIONALE. Does it include a brief synopsis of background that supports the research problem and explains why the research			

is important scientifically? If applicable, does it explain the societal impact of the research?			
B. HYPOTHESIS (ES), RESEARCH QUESTION(S), ENGINEERING GOAL(S), EXPECTED OUTCOMES. Is this based on RATIONALE?			
C. RESEARCH METHODS AND CONCLUSIONS			
a. Procedures. i. Does it show all procedures and experimental designs, including methods for data collection? ii. There should be NO inclusion of work of mentor or others. iii. Parameters should NOT be too strict to allow for possible changes			
b. Risk and Safety. Does it identify all potential risks and safety precautions needed?			
c. Data Analysis. i. Does it describe all procedures for data analysis? ii. Parameters should NOT be too strict to			

allow for possible changes			
D. BIBLIOGRAPHY. Does it have at least 5 major references? If using vertebrate animals, include 1 reference on animal care?(Chicago Manual Style)			
Note: Items 3.E-H are needed ONLY for researches on HUMAN PARTICIPANTS, VERTEBRATE ANIMALS, AND HAZARDOUS BIOLOGICAL AGENTS (see attached Research Plan/Project Summary Instructions)			
E. HUMAN PARTICIPANTS RESEARCH. Does it provide for the following? a. Description b. Recruitment c. Methods d. Risk Assessment e. Protection of Privacy f. Informed Consent Process			
F. VERTEBRATE ANIMAL RESEARCH. Does it provide for the following? a. Potential ALTERNATIVES to vertebrate animal use b. Potential impact or contribution of research c. Detailed procedures d. Detail animal numbers, strain, sex, age, source, etc. e. Describe housing and oversight of daily care			

f. Disposition of animals at study termination			
G. POTENTIALLY HAZARDOUS BIOLOGICAL AGENTS RESEARCH. Does it provide for the following? a. Biosafety Level Assessment & BSL determination b. Source of agent, specific cell line. c. Safety precautions d. Methods of disposal			
H. HAZARDOUS CHEMICALS, ACTIVITIES & DEVICES. Does it provide for the following? a. Risk Assessment process & results b. Chemical concentrations and drug dosages c. Safety precautions and procedures to minimize risks d. Methods of disposal			
4. Approval Form 1B (for ALL students)			
5. Abstract			

VERY IMPORTANT 2: See Part II, Risk Assessment (3) for

1. Studies involve protists, archaea and similar microorganisms.
2. Research using manure for composting, fuel production, or other non-culturing experiments.
3. Commercially available color change coliform water test kits. These kits must remain sealed and be properly disposed.
4. Studies involving decomposition of vertebrate organisms (such as in forensic projects).

5. Studies with microbial fuel cells.

PART 2: ADDITIONAL REQUIRED FORMS	Complete	Incomplete	Recommendations
<p>6. Regulated Research Institutional or Industrial Setting Form (1C). Must be completed AFTER experimentation by the adult supervising the student research conducted in a regulated research institution or any work site aside from home, school or field. Is it properly accomplished and signed by the DESIGNATED SUPERVISING ADULT?</p>			
<p>7. Qualified Scientist Form (2) – for researches with human participants, vertebrate animals, potentially hazardous biological agents, DEA-controlled substances; completed and signed BEFORE start of experimentation. Is it properly accomplished and signed by the QUALIFIED SCIENTIST?</p>			
<p>8. Risk Assessment Form (3) – for researches using hazardous chemicals, activities or devices and microorganisms exempt from pre-approval. Must be completed BEFORE</p>			

<p>experimentation. Is it properly accomplished and signed by DESIGNATED SUPERVISING ADULT OR QUALIFIED SCIENTIST (when applicable)?</p>			
<p>9. Human Participants Form (4) – for researches involving human participants not at a Regulated Research Institution. Did the the DESIGNATED ADULT SUPERVISOR/INSTITUTION approve the research BEFORE experimentation?</p>			
<p>10. Vertebrate Animal Form (5A) – for research involving vertebrate animals that is conducted in a school/home/field research site.</p> <p>A. Is it properly accomplished, approved and signed by SRC BEFORE experimentation?</p> <p>B. Is it properly accomplished, approved and signed by DESIGNATED VETERINARIAN BEFORE experimentation?</p> <p>C. Is it properly accomplished, approved and signed by DESIGNATED SUPERVISOR OR QUALIFIED SCIENTIST (as</p>			

<p>applicable) BEFORE experimentation?</p>			
<p>11. Vertebrate Animal Form (5B) – for research involving vertebrate animals that is conducted at a Regulated Research Institution. A. Does it have IACUC approval BEFORE experimentation? B. Is it properly accomplished, approved, and signed by a QUALIFIED SCIENTIST/PRINCIPAL INVESTIGATOR?</p>			
<p>12. Potentially Hazardous Biological Agents Risk Assessment Form (6A) – for researches involving microorganisms, rDNA, fresh/frozen tissue (including primary cell lines, human and other primate established cell lines and tissue cultures), blood, blood products and body fluids. A. Does it have SRC/IACUC/IBC approval BEFORE experimentation? B. Is it properly accomplished, approved and signed by a QUALIFIED or DESIGNATED</p>			

<p>SUPERVISOR BEFORE experimentation?</p> <p>C. Is it properly accomplished, approved, and signed by the SRC BEFORE experimentation?</p> <p>D. Human Vertebrate Animal Tissue Form (6B) – for research involving fresh/frozen tissue (including primary cell lines, human and other primate established cell lines and tissue cultures), blood, blood products and body fluids. If research involves living organisms, ensure that the proper human or animal forms are completed. All research using any tissue listed above must also complete Form 6A. Is it properly accomplished, approved and signed by a QUALIFIED or DESIGNATED SUPERVISOR BEFORE experimentation?</p>			
<p>13. Continuation/Research Progression Projects Form (7) – for research that are a continuation/progression in the same field of study as a previous research.</p>			

<p>A. This form MUST be accompanied by the PREVIOUS YEAR'S ABSTRACT and RESEARCH PLAN</p> <p>B. Is it properly accomplished, approved and signed by the student/s?</p>			
<p>PART 3: RESEARCH PAPER (See attached IMRAD</p>	<p>Complete</p>	<p>Incomplete</p>	<p>Recommendations</p>
<p>1. COVER PAGE A. Is the research title present? B. Is/Are the name/s of the student proponent's present? C. Is/Are the appropriate persons credited? (The Research adviser and Research Consultants, if applicable MUST be present)</p>			
<p>2. INTRODUCTION. Does it outline the research question and its significance within the topic discussed, making its relevance clear to readers in a CONCISE manner?</p>			
<p>3. METHOD. Does is clearly and comprehensively provide the reader with a description of the methods used in the research?</p>			
<p>4. RESULTS. Does is clearly and comprehensively</p>			

SHOW the reader what the research came up with? This should be the MAIN section of the paper.			
5. DISCUSSION. Does this show what the findings in "RESULTS" mean?			
6. LIMITATIONS ON THE RESEARCH DESIGN AND MATERIAL. Does this show knowledge and understanding of research limitations?			
7. Conclusion, Notes, Works Cited and Appendices/Bibliography A. Does the conclusion briefly and clearly analyze what the paper proposed, discussed and concluded? B. Is there in (MLA format) possible Researcher Notes, the research paper's Works Cited and possible appendices?			
PART 4: RESEARCH ABSTRACT (MAX. 250 WORDS)	Complete	Incomplete	Recommendations
1. Does it clearly and concisely state the PURPOSE OF THE RESEARCH?			
2. Does it clearly and concisely state the PROCEDURE/S			

undertaken in the RESEARCH			
3. Does it clearly and concisely state the DATA COLLECTED from the RESEARCH?			
4. Does it clearly and concisely state the CONCLUSIONS OF THE RESEARCH?			
VERY IMPORTANT: There should be NONE of the following:			
a. Acknowledgements of the research institutions and/or mentors with which the student w			
b. Self-promotions and external endorsements			
c. Inclusion of work or procedures done by the mentor			
PART 5: RESEARCH LOGBOOK	Complete	Incomplete	Recommendations
1. Is the logbook intact and not tampered with? It should NOT be loose-leafed.			
2. Does the START DATE in the logbook match the START DATE in Student Checklist (1A)?			
3. Does the END DATE in the logbook match the END DATE in Student Checklist (1A)?			
4. Are all the entries in the logbook properly dated?			
5. Does the logbook show accurate and detailed notes and findings throughout the course of the research? Does it include data tables, and the like?			

6. Does the logbook show accurate and detailed description of procedures and processes conducted in the course of the research?			
7. Does the logbook show student notes and questions in the course of the research?			

Review Complete Review Incomplete

Decision:

NAME and SIGNATURE
SRC

NAME and SIGNATURE
SRC

NAME and SIGNATURE
SRC

Enclosure No.7 to Memorandum No. ____ s. 2023

Board of Judges (BOJ

PROJECT EVALUATION FORM



PLEASE CHECK:

- () **REGIONAL SCIENCE AND TECHNOLOGY FAIR 2023**
() **DIVISION SCIENCE AND TECHNOLOGY FAIR 2023**
() **SCHOOL SCIENCE AND TECHNOLOGY FAIR 2023**

Title of Research Project :

School :

Project Category : () Life Science () Physical Science ()
Robotics

() Team () Individual

Category	Score
<p>1. Creative Ability (30)</p> <p>A. Does the project show creative ability and originality in the:</p> <ul style="list-style-type: none">a. research questions asked?b. approach to solving the problem?c. analysis of the data?d. interpretation of the data?e. use of equipment?f. construction or design of new equipment? <p>B. Creative research should support an investigation and help a question in an original way.</p> <p>C. A creative contribution promotes an efficient and reliable method for solving a problem. When evaluating a project, it is important to distinguish between gadgettering and ingenuity.</p>	

<p>2. Scientific Thought (30) (If an engineering project, please see 2b. Engineering Goals)</p> <ul style="list-style-type: none"> a. is the problems stated clearly and unambiguously? b. was the problem sufficiently limited to allow a plausible attack? Good scientists can identify important problems capable of solutions. d. was there a procedural plan for obtaining a solution? e. are the variables clearly recognized and defined? f. if controls were necessary, did the student recognize their need and were they used correctly? g. are there adequate data to support the conclusions? h. Does the finalist/team recognize the data's limitation? i. Does the finalist/team understand the project's ties to related research? j. Does the finalist/team have an idea of what further research is warranted? k. Did the finalist/team cite scientific literature, or only popular literature (e.g. local newspaper, magazines)? 	
<p>2B. Engineering Goals</p> <ul style="list-style-type: none"> a. Does the project have a clear objective? b. Is the objective relevant to the potential user's needs? c. Is the solution workable? Acceptable to the potential user? Economically feasible? d. Could the solution be utilized successfully in design or construction of an end product? e. Is the solution a significant improvement over previous alternative or application? f. Has the solution been tested for performance under the condition of use? 	
<p>3. Thoroughness (15)</p> <ul style="list-style-type: none"> a. Was the purpose carried out to completion within the scope of the original intent? b. How completely was the problem covered? c. Are the conclusions based on a single experiment or replication? d. How complete are the project notes? e. Is the finalist/team aware of other approaches or theories? f. How much time did the finalist or team spend on the project? g. Is the finalist/ team familiar with scientific literature in the studied field? h. Are the relevant details (including the pages and dates) of the experiment recorded in the research data logbook? 	

<p>4. Skill (15)</p> <ul style="list-style-type: none"> a. Does the finalist/team have the required laboratory, computation, observational and design skills to obtain the supporting data? b. Where was the project performed (i.e. home, school laboratory, university laboratory). Did the student or team receive assistance from parents, teachers, scientists or engineers? c. Was the project completed under the adult supervision, or did the student/team work largely alone? d. Where did the equipment come from? Was it built independently by the finalist/team? Was it obtained on loan? Was it part of a laboratory where the finalist/team worked? 	
<p>5. Clarity (10)</p> <ul style="list-style-type: none"> a. How clearly does the finalist/team discuss his/her/their project and explain the purpose, procedure, and conclusion? Watch out for memorized speeches that reflects little understanding of principles. b. Does the written material reflect the finalist's or team's understanding of the research? c. Are the important phases of the project presented in an orderly manner? d. How clearly is the data presented? e. How clearly are the results presented? f. How well does the project display explain the project? g. Was the presentation done in a forthright manner, without tricks or gadgets? h. Did the finalist/team perform all the project work, or did someone help? 	
<p>TOTAL</p>	
<p>Signature over printed name of the members of the board of judges</p>	

Enclosure 8: Innovation Expo Screening Form

TITLE OF THE PROJECT		
INDIVIDUAL/TEAM		
PROJECT PROPONENT/S		
CRITERIA	WEIGHT	RATING
ORIGINALITY AND CREATIVITY This criterion assesses the uniqueness and innovation of the project. It looks at how the research addresses a problem in a novel way or introduces creative solutions.	35%	
COMMUNITY CONNECTION & IMPACT This criterion evaluates how the innovation research benefits the community or society. It assesses the project's potential to make a positive impact and address real-world issues.	25%	
MARKET ATTRACTIVENESS This criterion examines the commercial viability of the innovation. It considers the potential market demand, scalability, and sustainability of the project.	25%	
UTILIZATION OF PATENT INFORMATION This criterion focuses on how well the project utilizes relevant patent information and avoids infringement on existing patents.	15%	
TOTAL	100%	
COMMENTS		

 Signature Over Printed Name
 Date Signed:

Enclosure 9: Innovation Expo Judges Form

TITLE OF THE PROJECT		
INDIVIDUAL/TEAM		
PROJECT PROPONENT/S		
CRITERIA	WEIGHT	RATING
ORIGINALITY AND CREATIVITY This criterion assesses the uniqueness and innovation of the project. It looks at how the research addresses a problem in a novel way or introduces creative solutions.	25%	
COMMUNITY CONNECTION & IMPACT This criterion evaluates how the innovation research benefits the community or society. It assesses the project's potential to make a positive impact and address real-world issues.	20%	
MARKET ATTRACTIVENESS This criterion examines the commercial viability of the innovation. It considers the potential market demand, scalability, and sustainability of the project.	15%	
FUNCTIONALITY AND TECHNOLOGY VALIDATION This criterion evaluates the practical functionality and performance of the innovation. It assesses how well the innovation functions in real-world scenarios and whether it meets the intended objectives. Researchers should demonstrate evidence of successful testing, validation, or prototypes to support the claims of the innovation's effectiveness.	25%	
PRESENTATION AND PRODUCT PRESENTATION This criterion looks at how effectively the innovation and research are presented to the audience. It assesses the clarity, coherence, and visual appeal of the poster display and any supplementary materials. Additionally, researchers' ability to communicate the innovation's key features, benefits, and impact in a compelling and engaging manner is considered. The criterion also considers how well the researchers answer questions and engage with expo attendees during their presentation.	15%	
TOTAL		
COMMENTS:		

Signature Over Printed Name
Date Signed: