



Republic of the Philippines
Department of Education
 REGION II - CAGAYAN VALLEY
 SCHOOLS DIVISION OF BATANES

11 September 2024

DIVISION MEMORANDUM
 No. 249, s. 2023

2024 DIVISION SCIENCE AND TECHNOLOGY FAIR

To: Assistant Schools Division Superintendent
 Chief Education Supervisors
 Elementary and Secondary School Heads
 This Schools Division

1. This office through the Curriculum Implementation Division announces the conduct of the 2024 Division Science and Technology Fair (RSTF) on October 16, 2024, in SDO Batanes.
2. This aims to continuously empower the youth and cultivate innovation and creativity amid the changing world. Likewise, the activity aims to showcase the competence of the learners in addressing community problems for sustainable development and to maximize their potential of being inquisitive and creative in dealing with real-life problems.
3. The official participants for the Division Science and Technology Fair are the ranked 1 School Winners in each of the different categories whose entries have been qualified and approved by the School Level Scientific Review Committee (SSRC).
4. Therefore, you are hereby advised to conduct your school-based Science Fair between September 16-30, 2024. The mechanics of the contested categories, description and number of official participants and other party members are attached herewith.
5. In preparation for the conduct of the Division Science and Technology Fair 2024, this office through the Curriculum Implementation Division (CID), encourages the participating secondary schools to submit research project manuscript in 4 copies on or before October 10, 2024.

6. School delegations shall take charge of their own materials, meals and snacks during the duration of the activity. Travel and other incidental expenses incurred by the participants shall be charged to their respective school MOOE and/or other sources of funds, subject to the usual accounting and auditing rules and regulations.
7. The upcoming Regional Science and Technology Fair RSTF has no official date yet as the guidelines and advisories from the Central Office are still subject to finalization and approval.
8. Should there be clarifications, queries, all concerned may contact **Jennifer H. Moro** EPS-Science, through the email address: jennifer.moro@deped.gov.ph and/or thru messenger or mobile number 0919-990-1107.
9. Immediate dissemination of this Memorandum to all concerned is desired.

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ALFREDO B. GUMARU JR. EdD, CESO V
Schools Division Superintendent *af*

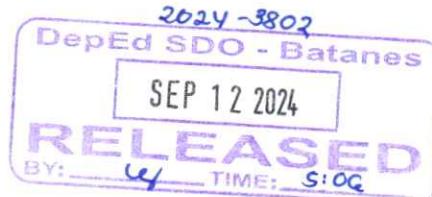
Enclosures: As stated

References: Regional Memorandum No. 351, s.2023

To be indicated in the Perpetual Index under the following subjects:

CONTEST
SCIENCE EDUCATION

CID/vbg/jhm



Enclosure No. 1 to the Division Memorandum No 249, s. 2024

Official Contested Categories of the Division Science and Technology Fair 2024

CATEGORIES	Number of Participants	Teacher-Adviser
Elementary Level		
1. Science Skills Olympics /Team	3	1
2. Poster Making	1	1
Secondary Level		
1. Poster Making	1	1
Science Investigatory Project		
1. Life Science- Individual	1	1
2. Physical Science- Individual	1	1
3. Life Science- Team	3	1
4. Physical Science - Team	3	1
5. Robotics Intelligent Machine- Individual	1	1
6. Robotics Intelligent Machine - Team	3	1
Innovation Expo Paper Format- Individual	1	1
Innovation Expo Paper Format-Team	3	1
	21	1
TOTAL	32	

INVESTIGATORY PROJECT: Research Categories

The STEM research competition is divided into four (4) categories. The student researchers and advisor should carefully consider which category best describes the research project. They may enter the competition as an individual or as a team.

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 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.

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).

Physical Project Board Dimension:

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

Photography/Images:

1. 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 photography, visual image, chart, table and/or graph is allowed if: 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.

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.

Safety Guidelines**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 nonmanufactured state (Exception: manufactured construction materials used in building the project or display)
8. All chemicals including water (projects may NOT use water in any form in a demonstration)
9. All hazardous substances or devices (i.e.: poisons, drugs, firearms, weapons, ammunition, reloading devices, lasers, etc.) Dry ice or other sublimating solids
10. Sharp items (i.e.: syringes, needles, pipettes, knives, etc.)
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
15. Any apparatus deemed unsafe by the Scientific Review Committee, the Display & Safety Committee of the Fair

Other Safety Restrictions:

- a. Any inadequately insulated apparatus producing extreme temperatures that may cause physical burns is not allowed.
- b. Any apparatus with unshielded belts, pulleys, chains, or moving parts with tension or pinch points must be for display only.
- c. Project sounds, lights, odors or any other display items must not be distracting.
- d. The Display & Safety Committee, and/or the Scientific Review Committee in various level of the Science Fair reserve the right to remove any project for safety reasons or to protect the integrity of the NSTF and its rules and regulations.

Innovation Expo Paper Format

- a. Title Page and Table of Contents: The title page and table of contents allows the reader to follow the organization of the paper quickly.
- b. Introduction:
 - 1) Features and Specifications – This describes the details of your invention.
 - 2) Market Trends and Opportunities – This part of the report must include three items: what inspired you to develop this invention, an explanation of what problem your invention will solve, and describe in detail how you determined that the invention that you created did not already exist. Explain what products are already on the market that are somewhat like your invention and describe how yours differs.
- c. **Materials and Methods:**
Describe in detail how you made your invention. Explain what materials were used and how you put them together to make your invention. Your report should be detailed enough so that someone would be able to repeat the steps and make your invention. Directions on how to use the invention are also necessary here. You must include a detailed drawing(s) of your invention.
- d. **Results and Discussion:**
This is the essence of your paper. Compare your results with theoretical values, published data, literature and related studies, commonly held beliefs, and/or expected results. Include a discussion of possible errors, statistics, graphs, pages with your raw collected data, etc. How did the data vary between repeated observations of similar events? How were your results affected by uncontrolled events? What would you do differently if you repeated this project? What other experiments should be conducted?
- e. **Conclusions:**
This discusses the potential applications, possible customer benefits, and the impact of the problem in solving problems and issues of today and tomorrow.
- f. **Acknowledgements:**
This part gives credit to those who have assisted you, including individuals, businesses and educational or research institutions.
- g. **References/Bibliography:**
Your reference list should be written based on the Chicago Manual of Style.

Innovation Expo Display Board Format

Title: The title should be short but would capture the essence of the product/invention

Picture: Picture of the product/invention only

Overview: What problem is solved by the invention?
What are the existing solutions and
What limitations do these solutions have?

Key Features: What are the novelty features of this invention?

Benefits and Impact: What are the benefits/impact of this invention?

Developers' Name: Who is/are the inventors?

Specifications:

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

SCIENCE SKILLS OLYMPICS- ELEMENTARY LEVEL GUIDELINES AND CRITERIA FOR SCIENCE SKILLS OLYMPICS

1. There will be three (3) members in each team. Contestants to this category are the municipal-based first place winners.
2. Materials for the activity shall be provided for each team.
3. Contestants shall write their experimental write-up on a sheet of bond paper following the format.
4. Contestants are given one (1) hour to perform the given activity and five (5) minutes for oral presentation including question and answer portion.

CRITERIA:

a. Follow the steps in experimentation	60%
• Problem	10%
• Hypothesis/Hypotheses	5%
• Materials	15%
• Procedures	15%
• Data and Observation	15%
• Conclusion	15%
b. Follow the standard in experimentation	30%
Proper usage of the materials and observation of	
Precautionary measures	10%
Teamwork	5%
Completion of experimental write-up	10%
Tiding up of the working place	5%
c. Oral presentation of Experiment	10%
Total	100%

ELEMENTARY AND SECONDARY ON-THE-SPOT POSTER MAKING CONTEST GUIDELINES/MECHANICS:

1. The contest is open to Elementary/Secondary students enrolled in any schools/institutions in Division. One (1) participant for elementary/ 1 team (3 members) per division. Joining the contest will be free of charge.
2. The poster must illustrate, interpret, and emphasize the theme which will revolve around _____. The specific theme will be announced on the day of the contest.
3. The posters will be drawn on a 1/2 illustration board. The illustration board, as well as coloring materials will be provided by the participants. Participants must bring their own choice of coloring media.
4. To complete the posters, participants will be given two (2) hours for secondary and two (2) hours and thirty (30) minutes for elementary.
5. The participants will be held accountable for any issues that may arise regarding the originality and authenticity of the design.
6. All entries must be pre-numbered.
7. No other identifying marks will be allowed to appear in the artworks.
8. All entries shall be judged by a Board of Judges.
9. The decision of the board of judges is final and irrevocable.

CRITERIA

The criteria for judging will be as follows:

Creativity and Presentation _____ 40%

Originality _____ 30%

Relevance to the theme _____ 30%