



Republic of the Philippines
Department of Education
 REGION I

SCHOOLS DIVISION OFFICE OF ALAMINOS CITY

Office of the Schools Division Superintendent

SDO ALAMINOS
RELEASED
 2023-10-27
 RECORDS UNIT

DIVISION MEMORANDUM
DM-2023 - 536

TO : Assistant Schools Division Superintendent
 Chief Education Supervisor - SGOD
 Chief Education Supervisor - CID
 Division Education Program Supervisor In-Charge in Science
 Heads of Public and Private Elementary and Secondary Schools
 All Others Concerned

SUBJECT : **2023 DIVISION SCIENCE AND TECHNOLOGY FAIR (DSTF)**

FROM : Office of the Schools Division Superintendent

DATE : October 25, 2023

1. This Office through the Curriculum Implementation Division will conduct the 2023 Division Science and Technology Fair with the theme "Rebuilding Resilient Communities: Embracing Science and Technology for a Sustainable Future" on November 9-10, 2023 at the Alaminos City National High School, Alaminos City, Pangasinan.
2. The 2023 DSTF aims to:
 - a.) promote Science and Technology consciousness and a culture of innovation among the youth and identify the most creative and innovative student researchers from the Junior and Senior High School who will represent the division to the 2023-2023 Regional Science and Technology Fair (NSTF);
 - b.) integrate the cultivation of crucial research skills such as critical thinking, problem-solving, and the stimulation of innovation and creativity; and
 - c.) propel academic success and prepare the learners for excellence in their future academic pursuits and careers.
3. Relative to this, the following is the schedule of activities:

Activity	Date/Schedule
School Level Preparations	October- Nov 8, 2023
Division Level Competition	November 9-10, 2023
Submission of Entries (First Placers & Second Placers per category in the Science Investigatory)	November 16, 2023

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Project (SIP) Final Paper Competition) to the Division Level	
Submission of Entries (First Placers & Second Placers per category in the Science Investigatory Project (SIP) Final Paper Competition) to the Regional Level	November 20, 2023
Regional Paper Evaluation (SRC Screening)	November 25, 2023
Regional Science and Technology Fair	Nov. 30 – Dec. 1, 2023

4. Please refer to the attached 2023 Division Science and Technology Fair Schedule of Activities and Mechanics and Guidelines for your guidance.
5. For information, guidance, wide dissemination, and compliance.

VIVIAN LUZ S. PAGATPATAN, CESO VI
Assistant Schools Division Superintendent
Officer-In-Charge
Schools Division Superintendent

Enclosure 1 to Division Memo No. 536, s. 2023

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Enclosure 1 to Division Memo No. 536, s. 2023

A. SCHEDULE OF ACTIVITIES

<ul style="list-style-type: none"> ➤ Opening Program ➤ AGLITEKNO (Agham, Likha at Teknolohiya) Research Competition <ul style="list-style-type: none"> a. Science Investigatory Project (SIP) Proposal b. Science Investigatory Project (SIP) ➤ Sci-KID Show (Stage 1) ➤ Sci-DESENYO 	Day 1 - November 9, 2023
<ul style="list-style-type: none"> ➤ Project EINSTEIN Exhibit featuring AGLITEKNO (Agham, Likha at Teknolohiya) Researches <ul style="list-style-type: none"> a. Science Investigatory Project (SIP) Proposal b. Science Investigatory Project (SIP) c. Sci-DESENYO Outputs ➤ Sci-KID Show (Stage 2/Final Round) ➤ Closing Program 	Day 2 - November 10, 2023

**Participants must submit parental consent and ID or Certificate of enrolment to the pre-registration link to be posted at the Division Science Coordinators' Group Chat.*

B. 1 MECHANICS AND GUIDELINES OF THE 2023 DIVISION SCIENCE AND TECHNOLOGY FAIR (ELEMENTARY LEVEL)

1. Sci-KID SHOW

1. The contest is open to all SDO Alaminos City's Grade 4-6 learners. There will be one (1) team with three (3) members per school.
2. All the registered teams will join Stage 1, where 20 items of the written Quiz will be answered by the team participants.
3. Top 5 teams will join the Stage 2 or the Final Round of the competition. There will be three (3) components in the Final Round namely: **EASY, MODERATE**, and **DIFFICULT**. The EASY round has ten (10) multiple choice questions worth one (1) point, the MODERATE round has ten (10) multiple and identification questions worth two (2) points and the DIFFICULT round has five (5) identification questions worth three (3) points. A clincher round may be conducted of a tie score.
4. The questions will be read by the quizmaster twice.
5. After the second (2nd) reading, the quizmaster shall say "go", only then the participants be allowed to write their answers. Automatically, the ten (10) second-time limit (for **EASY**

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and **MODERATE**) and twenty (20) second-time limit (for **DIFFICULT**) will begin with the word "go" by the quizmaster.

6. After the time limit, the quizmaster shall say "Boards up", and the team must stop writing and must raise their answer board.

7. Correct spelling, punctuation marks, units, symbols, and proper writing of scientific names should be followed correctly.

8. The contestant who gets the highest number of points is automatically declared the First Placer, and the one who gets the 2nd highest score will be the Second Placer, the team with the 3rd highest score will be the Third Placer and the team who ranks 4th will be the Fourth Placer.

9. Winners will receive medals and certificates and non-winner will receive certificates.

2. Sci-DESENYO

1. The contest is open to all SDO Alaminos City's Grade 4-6 learners. There will be one (1) team with two (2) members per school.

2. The collage must interpret and emphasize the theme, "Rebuilding Resilient Communities: Embracing Science and Technology for a Sustainable Future."

3. The members of the team are responsible for bringing all the materials they need to the contest such as, but not limited to, illustration board, glue, glue stick, glue gun, stapler, tapes, recycled and indigenous materials, and others. Should the contestants need electrical devices in preparing their collage, they must bring their extension wires.

4. The coach shall not provide any material for the contestants during the contest.

5. Each team shall bring all their materials to the contest venue on the date and time of the competition. They shall only start preparing their entry during the official contest time.

6. The collage must be put on a ¼ illustration board with a 1" margin using a minimum of five (5) recycled and indigenous materials within two (2) hours.

7. All participants should be at the venue 15 minutes before the contest proper. Contestants who report late to the contest venue shall still be allowed to make their collage but will not be given time extensions. Their working time shall expire with the end of the official working two-hour time.

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8. Contestants are not allowed to use dangerous chemicals in the preparation of their collages.

9. The collage shall be judged according to the following criteria:

Relevance to the theme	40%
Creativity	25%
Originality	25%
Visual Impact	10%
Total	100%

11. The top 3 winners receive medals and certificates, and the non-winners will receive certificates.

12. The decision of the Board of Judges shall be final and irrevocable.

13. The winning entries will be automatically displayed for the exhibit.

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B.2 MECHANICS AND GUIDELINES OF THE 2023 DIVISION SCIENCE AND TECHNOLOGY FAIR (SECONDARY LEVEL - NON-STE/STEM IMPLEMENTER)

1. AGLITEKNO (Agham, Likha at Teknolohiya) Research Competition

a. Science Investigatory Project (SIP) Proposal

1. This competition is open to all Grade 9-12 students from non- STE/STEM implementers of the Schools Division of Alaminos City.
2. The competition has three (3) major categories which are Life Science, Physical Science and Robotics and Intelligent Machines.

Life Science	Physical Science	Robotics and Intelligent Machine
Individual	Individual	Individual
Team	Team	Team

*Every team category shall consist of 2-3 student researchers. There should only be one (1) teacher-coach per category.

3. The Project Proposal will be judged according to the following criteria:

CRITERIA	DESCRIPTION	WEIGHT
Originality and Innovation	The project provides novel and innovative solutions to issues in the environment	20%
Technical/ Scientific Merit	Sound scientific basis to generate new knowledge or apply existing knowledge in an innovative manner	20%
Community Connection and Impact	Outcomes are expected to address the issue or problem identified.	20%
Excellence of Method	The solution and method proposed and cost-effective, viable, timely, and relevant.	20%
Presentation	Proponent/s provide/s a clear explanation of the facts, theories, and thorough understanding of the expected output of the proposal	20%
Total		100 %

PROJECT FORMAT DESCRIPTION:

- A. Executive Summary-** a brief discussion about the proposal.
- B. Introduction-** a declaration of the project and its idea and context to explain the goals and objectives to be reached and other relevant information that explains the need for the project and states the aims to describe the amount of work

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planned for implementation; refers to a simple explanation or depiction of the project that can be used as communication material.

- **Rationale** - a brief analysis of the problems identified related to the project.
 - **Significance** - refers to the alignment to national S&T priorities, strategic relevance to national development, and addresses current issues and concerns.
 - **Scientific Basis** - scientific findings, conclusions, or assumptions used as justification for the research.
 - **Theoretical Framework** - the structure that summarizes concepts and theories that serve as the basis for the data analysis and interpretation of the research data.
 - **Objectives** - statements of the general and specific purposes to address the problem areas of the project.
- C. **Review of Literature** - refers to the following: (a) related research that has been conducted, state-of-the-art or current technologies from which the project will take off; (b) scientific/technical merit; (c) results of related research conducted by the same Project Leader, if any; (d) Prior Art Search, and; (e) other relevant materials.
- D. **Methodology** - description of the design and engineering solution proposed to address the problem, the (a) variables or parameters to be measured and evaluated or analyzed; (b) treatments to be used and their layout; (c) experimental procedures and design; (d) statistical analysis; (e) evaluation method and observations to be made, strategies for implementation (Conceptual/ Analytical framework).
- E. **Expected Output and Potential Impact** - discuss the possible outcome of the project, the target beneficiaries, and socio and economic impact.
- F. **Workplan and Target Deliverables** - indicates the timeline of activities to be accomplished in the conduct of the project.
- G. **References** - list of reference materials such as journals, designs and patents, and online sources. It should follow the Chicago Manual of Style in writing your reference.

*For your guide and reference, please visit the following link:
<https://tinyurl.com/2mhvtrv6>

4. Proponent/s must submit three (3) hard copies in A4 size of bond paper/folder of their project proposal using the following project code and color of folder.

CATEGORIES	PROJECT CODE	COLOR OF FOLDER
LIFE SCIENCE - INDIVIDUAL	LS - I -AC	Green
LIFE SCIENCE - TEAM	LS -T - AC	Yellow
PHYSICAL SCIENCE - INDIVIDUAL	PS-I-AC	Blue
PHYSICAL SCIENCE - TEAM	PS-T-AC	Red
ROBOTICS AND INTELLIGENT MACHINE - INDIVIDUAL	RIM-I-AC	Orange

Example:



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ROBOTICS AND INTELLIGENT MACHINE – TEAM	RIM-T -AC	Violet
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5. PROJECT DISPLAY BOARD

- The project display summarizes the research proposal must focus on the proponent's work and should not include his/her face in illustration in the display.
- The setting-up of the exhibit (Project Display Board) with a steel/wooden stand with a measurement of 1 meter by 2.5 meters in portrait dimension made from photo papers and/or tarpaulin shall start on November 8 at 4:00 PM until November 9 at 8:00 AM at the ACNHS Gymnasium.

*For your guide and reference, please visit the following link:
<https://tinyurl.com/59cchnzy>

6. ORAL PRESENTATION/DEFENSE

- Proponent/s must prepare a 3–5-minute presentation that covers the entire research project proposal.
- After the presentation, the proponent/s will be given 3–5 minutes to answer questions from the board of judges.

7. PROVISION OF WINNERS

- The top three (3) winners together with their coaches in each category will receive certificates of recognition.
- The Awards Committee will also give the following special awards:
 - ✓ Best Presenters in each category (Life Science, Physical Science, Robotics and Intelligent Machines, and Mathematics and Computational Sciences)
 - ✓ Best Display Board in each category (Life Science, Physical Science, Robotics and Intelligent Machines, and Mathematics and Computational Sciences)

8. The Division Technical Working Committee reserves the right to remove, reject, or disqualify any entry if it infringes, misappropriates, or violates any rights of any third party including, without limitation, patent, copyright, trademark, or right of privacy or publicity.

9. For more information, please contact Dr. Cynthia B. Tablang, Division Education Program Supervisor in Science, Schools Division of Alaminos City, Alaminos City, Pangasinan.

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B.3 MECHANICS AND GUIDELINES OF THE 2023 DIVISION SCIENCE AND TECHNOLOGY FAIR (SECONDARY LEVEL - STE/STEM IMPLEMENTER)

1. AGLITEKNO (Agham Likha at Teknolohiya) Research Competition

a. Science Investigatory Project (SIP)

1. This competition is open to all Grade 9-12 students from STE/STEM implementers of the Schools Division of Alaminos City.
2. The five (5) main categories are: a) Life Science, b) Physical Science, c) Robotics & Intelligent Machines, d) Mathematics & Computational Science, and e) Science Innovation Expo (Inventions).
3. Three (3) hard copies of write-ups placed in A4 size bond papers and a folder following the Project Code (to be printed in black marker at the upper left corner of every folder) and color of folders to be used as specified below:

Category of Investigatory Project	Project Code	Color of Folder
1)Life Science -Individual	LS-I-AC	Green
2)Life Science -Team	LS-T-AC	Yellow
3)Physical Science -Individual	PS-I-AC	Blue
4)Physical Science -Team	PS-T-AC	Red
5)Robotics & Intelligent Machines -Individual	RIM-I-AC	Orange
6)Robotics & Intelligent Machines -Team	RIM-T-AC	Violet
7)Mathematics & Computational Sciences -Individual	MCS-I-AC	Brown
8)Mathematics & Computational Sciences -Team	MCS-T-AC	Black
9)Science Innovation Expo -Individual	SIE-I-AC	Pink
10)Science Innovation Expo -Team	SIE-T-AC	White

*Every team category shall consist of 2-3 student-researchers. There should only be one (1) teacher-coach per category.

4. THE COMPLETE PARTS OF INVESTIGATORY PROJECT WRITE-UP (arranged from top to bottom)

A. For Life Science, Physical Science, Robotics & Intelligent Machines

*Title Page and Table of Contents

Part 1. Required Forms for All Researches

1. Research Plan

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- A. Rationale
- B. Research Question or Problem
- C. Hypothesis
- D. Goals/ Expected Outcomes
- E. Research Methods/ Procedures/ Risk & Safety
- F. Bibliography

2. Abstract

Part 2. Research Paper (Observe IMRAD Format)

1. Cover Page
2. Introduction
3. Methodology
4. Results
5. Discussion
6. Limitations on The Research Design & Material
7. Conclusions, Recommendations, Notes, Works Cited and Appendices/
Bibliography & Pictorials

Part 3. Research Abstract (Maximum of 250 Words)

*Curriculum Vitae (Researcher)

*Curriculum Vitae (Research Adviser/Coach)

B. For Mathematics and Computer Sciences Paper Format

1. **INTRODUCTION** - What is your research question?

- Explain what is known or has already been done in your research area. Include a brief review of relevant literature.
- If this is a continuation project, a brief summary of your prior work is appropriate here. Be sure to distinguish your previous work from this year's project.

2. **FRAMEWORK** – What is your framework?

- Introduce the concepts and notation needed to specify your research question, methods, and results precisely.
- Define relevant terms and explain prior/background results. (Novel concepts developed as part of your project can be presented here or in Section 4, as appropriate.)

3. **FINDINGS** – What are your findings and supporting arguments?

- What did you discover and/or prove? Describe your result(s) in detail. If possible, provide both formal and intuitive/verbal explanations of each major finding.
- Describe your methods in general terms.
- Present rigorous proofs of the theory results – or, if the arguments are long, give sketches of the proofs that explain the main ideas.

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- For numerical/statistical results, include tables and figures that illustrate your data. Include relevant statistical analysis. Were any of your results statistically significant? How do you know this?

4. **CONCLUSIONS** - What is your assessment of your findings?

- How do the results address your research question? And how have you advanced your readers' understanding relative to what is already known?
- Discuss possible limitations. Did any questions or problems arise that you were not expecting? What challenges do you foresee in extending your results further?
- What application(s), if any, do you see for your work?

5. **REFERENCES**—What are your sources?

- This section should not exceed one page. Limit your list to the most important references.
- List the references/documentation used which were not of your own creation (i.e., books, journal articles).
- Your reference list should be written based on the Chicago Manual of Style. For more information, you may visit the websites below:
 - <http://www.chicagomanualofstyle.org/home.html>

- <http://www.calvin.edu/library/knightcite/index.ph>

C. For Science 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 will 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

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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?

f) **Conclusions:** This discusses the potential applications, possible customer benefits, and the impact of the problem in solving problems and issues of today and tomorrow.

g) **Acknowledgements:** This part gives credit to those who have assisted you, including individuals, businesses and educational or research institutions.

h) **References/Bibliography:** Your reference list should be written based on the Chicago Manual of Style.

5. PROJECT DISPLAY BOARD

- The project display summarizes the research project and must focus on the proponent's work and if applicable with only minimal reference to previous research.
- The setting-up of exhibit (Project Display Board) with steel/wooden stand with measurement of 1 meter by 2.5 meters in portrait dimension made from photo-papers and/or tarpaulin shall start on November 8 at 4:00 PM until November 9 at 8:00 AM at the ACNHS Gymnasium.
- 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.
- A proponent should not include his/her face in the project's procedure/illustration in the display.

6. CRITERIA FOR JUDGING

- The Board of Judges in the division paper evaluation (SRC screening) and in the division level Science and Technology Fair shall evaluate the qualified Science Investigatory Projects based on the following criteria for judging:

Impact of Investigatory Project to the Community	25%
Originality, Creativity & Inventiveness	25%
Thoroughness, Accuracy & Completeness of Write-up	25%
Presentation	25%
Total -----	100%

7. ORAL PRESENTATION/DEFENSE

- During the DSTF, there shall be an oral presentation (with PowerPoint presentation) within 3-5minutes by the student-researchers to the board of judges. A 3-5minute question and answer portion with the board of judges

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shall follow right after the oral presentation.

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- The Awards Committee will also give the following special awards:
 - ✓ Best Presenter in each category (Life Science, Physical Science, Robotics and Intelligent Machines, and Mathematics and Computational Sciences)
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