



**SEP 10 2018**

**DIVISION MEMORANDUM**

No. **310**, s. 2018

**2018 DIVISION LEVEL SCIENCE AND TECHNOLOGY FAIR**

**To:** OIC, Office of the Asst. Schools Division Superintendent  
Chief Education Supervisors - CID & SGOD  
Education Program Supervisors  
Public Schools District Supervisors  
Public and Private Elementary and Secondary School Heads  
Administrative Officer V


1. DepED-Division of Lapu-Lapu City, through the Curriculum Implementation Division (CID), announces the conduct of the Division Level Science and Technology Fair on **October 19-20, 2018** at **Marigondon Elementary School**. The conduct of the District Level Science and Technology Fair shall be held on **October 5-6, 2018**.
2. The Division Level Science and Technology Fair aims to
  - a. promote Science and Technology consciousness, and a culture of innovation among the learners;
  - b. identify the most creative and innovative student researchers who shall represent DepED-Division of Lapu-Lapu City in the Regional Science and Technology Fair; and
  - c. encourage Science teachers' creativity in designing Strategic Intervention Materials (SIM);
3. The research plan and scientific research paper must comply with the format specified in the ISEF Rules and DepED Memorandum No. 134, s. 2018 which can be downloaded from **www.deped.gov.ph**. All research projects from the school to district level must undergo peer, teacher and expert evaluation.
4. The required research forms and manuscripts, copies of SIMs (Soft and Hard copy), and the Official List of Contestants and Coaches shall be submitted to the Division Office on or before **October 10, 2018** and must be endorsed by the respective Public Schools District Supervisor. The Division Scientific Review Committee (SRC) shall conduct the screening of the research projects on **October 11-19, 2018**. The qualifiers for the Research Competition will be announced during the Opening Program while the entries for the other contests and categories shall automatically advance to the Division Level Science and Technology Fair.
5. The following documents are enclosed for information and guidance of all concerned:
  - Enclosure No. 1 – Mechanics for Science Investigatory Project;
  - Enclosure No. 2 – Format of Research Paper;
  - Enclosure No. 3 – Project Evaluation Form;
  - Enclosure No. 4 – Format of Paper Invention Report
  - Enclosure No. 5 – Format of Display Board for the Innovation Expo
  - Enclosure No. 6 – Mechanics for the Science Quiz;

Enclosure No. 7 – Criteria for Strategic Intervention Material;  
 Enclosure No. 8 – Criteria for the Poster Making Contest;  
 Enclosure No. 9 – SRC Review & Recommendation Report;  
 Enclosure No. 10 – Program Schedule Matrix; and  
 Enclosure No. 11 – Working Committees.

6. The participants are the Public Schools District Supervisors, Education Program Supervisors and coaches and winners in the District Level of the following contests and categories:

<b>Maximum Number of Participants and Coaches per District = 112</b>			
	Individual	Team	Coach
SIP-Life Science (Top 2 Elem Winners)	2	6	4
SIP-Physical Science (Top 2 Elem Winners)	2	6	4
SIP-Robotics and Intelligent Machines (Top 2 Elem Winners)	2	6	4
SIP-Life Science (Top 2 JHS/SHS Winners)	2	6	4
SIP-Physical Science (Top 2 JHS/SHS Winners)	2	6	4
SIP-Robotics and Intelligent Machines (Top 2 JHS/SHS Winners)	2	6	4
Science Innovation Expo (Top 2 JHS/SHS Winners)	2		2
Science Quiz – Grade 1-3 (Key Stage 1)	3		3
Science Quiz – Grade 4-6 (Key Stage 2)	3		3
Science Quiz – Grade 7-10 (Key Stage 3)	3		3
Science Quiz – Grade 11-12 (Key Stage 4)	3		3
Poster Making Contest - Elementary	2		2
Poster Making Contest – JHS/SHS	2		2
Strategic Intervention Material (Elem Teacher)	2		
Strategic Intervention Material (JHS/SHS Teacher)	2		
<b>TOTAL</b>	<b>34</b>	<b>36</b>	<b>42</b>

7. Lunch, snacks, and other incidental expenses of coaches and contestants including the supplies and materials and honoraria of the Board of Judges shall be charged against School/Division MOOE/PTA/SEF/Local Fund subject to usual accounting and auditing rules and regulations.
8. Immediate dissemination of and compliance with this Memorandum is desired.

  
**MARILYN S. ANDALES, Ed. D., CESO VI**  
 Schools Division Superintendent



**MECHANICS FOR SCIENCE INVESTIGATORY PROJECT**

1. The competitions will be conducted among Elementary and Secondary School students from both public and private schools. The first place winners in each of the categories at the District level shall represent the district to the Division Level Science and Technology Fair as approved by the Division Scientific Review Committee (SRC).
2. The competition will start at the school level advancing to the district, division, regional, national then to the international level.
3. The participation of Elementary and Secondary schools in the Division Level Science and Technology Fair shall be clustered into three types: life science, physical science, and robotics and intelligent machines.

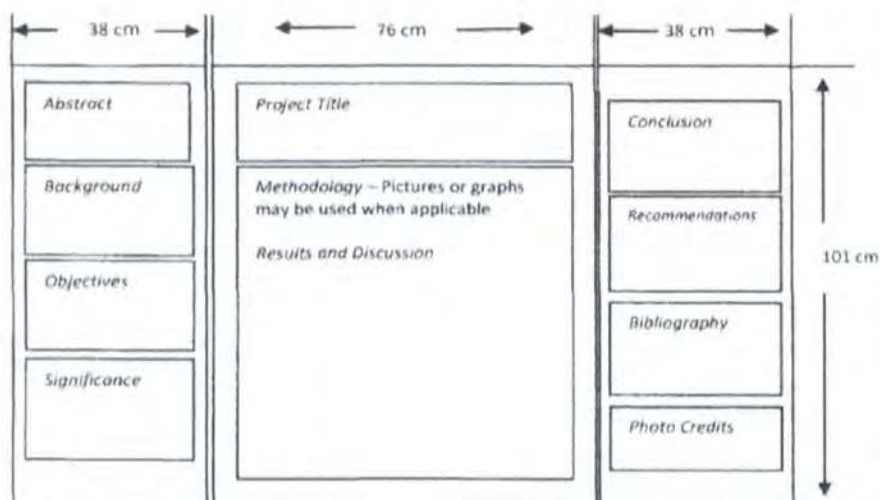
Life Science (LS)		Physical Science (PS)		Robotics and Intelligent Machines (RIM)	
Individual Project	Team Project	Individual Project	Team Project	Individual Project	Team Project

4. The following are the forms and manuscripts to be submitted in all levels of the competition:
  - A. RESEARCH PLAN
  - B. FORMS for all the projects
    - a. Checklist for Adult Sponsor B.
    - b. Student Checklist (1A)
    - c. Research Plan (NOTE: No need to attach the Research Plan Instructions)
    - d. Approval Form (1B)
    - e. Regulated Research Institutional/Industrial Setting Form (1C)
  - C. FORMS depending on the type of research (e.g involving humans, vertebrate 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. Vertebrate Animal Form (SA)
    - f. Vertebrate Animal Form (SB)
    - g. Potentially Hazardous Biological Agents Risk Assessment Form (6A)
    - h. Human and Vertebrate Animal Tissue Form (6B)
    - i. Continuation Project Form (7)
  - D. Abstract (Maximum of 250 words) The abstract should include the following:
    - a. Purpose of the experiment
    - b. Procedure
    - c. Data conclusionThe abstract may NOT include the following:
    - a. Acknowledgement
    - b. Work of procedures done by the mentor
  - E. Research Paper (Include the Title Page, Abstract, Main Body, and References)
  - F. Project Evaluation Form
  - G. Scanned copy of the log book in pdf format
5. Project of proponents should have been screened by the Institutional Review Board (IRB)/SRC at the district-level. All district level winners must be certified by the division SRC to join in the division-level fair.

6. The Top Winner for each category at the district level should be officially endorsed to the division office for the division-level.
7. The science research projects must conform with international rules published by the Intel International Rules for Pre-college Science Research: Guidelines for Science and Engineering Fair 2018. Each project is expected to have a Research Adviser and an Institutional Review Board (IRB) or a Scientific Review Committee (SRC).

Ethics Statement. Scientific fraud and misconduct is 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.

#### 8. The Exhibit



#### 9. Display and Safety Regulations

The project display using sets of any paper or board 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 Science and Technology Fair 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 be adhered to should be consistent with the guidelines found on page 24 of the ISEF guidelines

(<http://www.societyforscience.org/isef/rulesandguidelines>).

The following items should be seen in the project display: Abstract, Background, Objectives, Significance, Methodology, Results and Discussion, Conclusion, 4

Recommendations, Bibliography and if applicable, Photo Credits (including illustrations and graphics). *Note that a proponent should not include his/ her face in the project's procedure/ illustration in the display.*

#### 10. 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 (Refer also at ISEF Student Handbook website: <https://member.societyforscience.org>).

*[Handwritten signature]*



## **FORMAT OF RESEARCH PAPER**

Investigatory papers that were reviewed by the national SRCs in the past years were found to have inadequacies in the content, particularly in the areas cited below. To ensure that the investigatory papers are of good quality, students must adhere to the guidelines shown below.

These can be found in the Guidelines and in the Student Handbook and Research Plan Instructions published in the website (<https://www.societyforscience.org>).

### **I. Research Plan:**

(This is compiled separately from the rest of the investigatory paper): All projects should include the following:

- A. Question or Problem being addressed
- B. Goals /Expected Outcomes /Hypotheses
- C. Description in detail of method or procedures (The following are important and key items that should be included when formulating ANY AND ALL research plans.)
  - Procedures: Detail all procedures and experimental design to be used for data collection.
  - Data Analysis: Describe the procedures to be used to analyze the data/results that answer research questions or hypotheses.
- D. Bibliography: List at least five (5) major references (e.g. science journal articles, books, internet sites) from your literature review. If you plan to use vertebrate animals, one of these references must be an animal care reference.

### **II. Project Data Book:**

A project data book is your most treasured piece of work. Accurate and detailed notes make a logical and winning project. Good notes show consistency and thoroughness to the judges and will help you when writing your research paper. Data tables are also helpful. They may be a little 'messy' but be sure the quantitative data recorded is accurate and that units are included in the data tables. Make sure you date each entry.

### **III. Research Paper:**

A research paper should be prepared and available along with the project data book and any necessary forms or relevant written materials. A research paper helps organize data as well as thoughts. A good paper includes the following sections.

#### **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:**

The introduction sets the scene for your report. The introduction includes the purpose, your hypothesis, problem or engineering goals, an explanation of what prompted your research, and what you hoped to achieve.

#### **c) Materials and Methods:**

Describe in detail the methodology you used to collect data, make observations, design apparatus, etc. Your research paper should be detailed enough so that someone

would be able to repeat the experiment from the information in your paper. Include detailed photographs or drawings of self-designed equipment. Only include this year's work.

**d) Results:**

The results include data and analysis. This should include statistics, graphs, pages with your raw collected data, etc.

**e) Discussion:**

This is the essence of your paper. Compare your results with theoretical values, published data, commonly held beliefs, and/ or expected results. Include a discussion of possible errors. 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:**

Briefly summarize your results. State your findings in relationships of one variable with the other. Support those statements with empirical data (one average compared to the other average, for example). Be specific, do not generalize. Never introduce anything in the conclusion that has not already been discussed. Also mention practical applications.

**g) Acknowledgements:**

You should always credit those who have assisted you, including individuals, businesses and educational or research institutions. However, acknowledgments listed on a project board are a violation of D & S Display rules and must be removed.

**h) References/Bibliography:**

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.php>

**IV. Abstract:**

After finishing research and experimentation, an abstract should be written. This needs to be a maximum of 250 words on one page. It should include the a) purpose of the experiment, b) procedures used, c) data, and conclusions. It also may include any possible research applications. Only minimal reference to previous work may be included. The abstract must focus on work done in the current year and should not include a) acknowledgments, or b) work or procedures done by the mentor. See below for examples of award winning abstracts. See page 27 of the International Rules for the proper formatting of an Official Intel ISEF Abstract and Certification. Please Note: The official abstract form is only for those participating in ISEF. This form may not be required for other levels of competition.





### NSTF Board of Judges (BOJ)

## Project Evaluation Form

Title of Research Project : \_\_\_\_\_

Project Proponent/s : \_\_\_\_\_

School \_\_\_\_\_

Project Category:    ☐ Life Science    ☐ Physical Science    ☐ Robotics and Intelligent Machines (RIM)  
                               ☐ Team                      ☐ Individual

CATEGORY	SCORE
<p><b>1. Creative Ability (30)</b></p> <ol style="list-style-type: none"> <li>Does the project show creative ability and originality in the:               <ol style="list-style-type: none"> <li>questions asked?</li> <li>approach to solving the problem?</li> <li>analysis of the data?</li> <li>interpretation of the data?</li> <li>use of equipment?</li> <li>construction or design of new equipment</li> </ol> </li> <li>Creative research should support an investigation and help answer a question in an original way.</li> <li>A creative contribution promotes an efficient and reliable method for solving a problem. When evaluating project, it is important to distinguish between gadgeteering and ingenuity.</li> </ol>	
<p><b>2. a. Scientific Thought (30)</b></p> <p>(If an engineering project, please see 2b. Engineering Goals.)</p> <ol style="list-style-type: none"> <li>Is the problems stated clearly and unambiguously?</li> <li>Was the problem sufficiently limited to allow plausible attack? Good scientists can identify important problems capable of solutions.</li> <li>Was there a procedural plan for obtaining a solution?</li> <li>Are the variable clearly recognized and defined?</li> <li>If controls were necessary, did the student recognize their need and were they used correctly?</li> <li>Are there adequate data to support the conclusions?</li> <li>Does the finalist/team recognize the data's limitations?</li> <li>Does the finalist/team understand the project's ties to related research?</li> <li>Does the finalist/team have an idea of what further research is warranted?</li> <li>Did the finalist/team cite scientific literature, or only popular literature (e.g. local newspapers, magazines)?</li> </ol> <p><b>b. Engineering Goals</b></p> <ol style="list-style-type: none"> <li>Does the project have a clear objective?</li> <li>Is the objective relevant to the potential user's needs?</li> <li>Is the solution: workable? Acceptable to the potential user? Economically feasible?</li> <li>Could the solution be utilized successfully in design or construction of an end product?</li> <li>Is the solution a significant improvement over previous alternatives or application?</li> <li>Has the solution been tested for performances under the conditions of use?</li> </ol>	

2

<b>3. Thoroughness (15)</b>  1. Was the purpose carried out to completion within the scope of the original intent? 2. How completely was the problem covered? 3. Are the conclusions based on a single experiment or replication? 4. How complete are the project notes? 5. Is the finalist/team aware of other approaches or theories? 6. How much time did the finalist or team spend on the project? 7. Is the finalist/team familiar with scientific literature in the studied field? 8. Are the relevant details ( <i>including the pages and dates</i> ) of the experiment recorded in the research data logbook?	
<b>4. Skill (15)</b>  1. Does the finalist/team have the required laboratory, computation, observational and design skills to obtain the supporting data? 2. 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? 3. Was the project completed under adult supervision, or did the student/team work largely alone? 4. Where did the equipment come from? Was it built independently by the finalist or team? Was it obtained on loan? Was it part of a laboratory where the finalist/team worked?	
<b>5. Clarity (10)</b>  1. How clearly does the finalist or team discuss his/her/their project and explain the purpose, procedure, and conclusions? Watch out for memorized speeches that reflect little understanding of principles. 2. Does the written material reflect the finalist's or team's understanding of the research? 3. Are the important phases of the project presented in an orderly manner? 4. How clearly is the data presented? 5. How clearly are the results presented? 6. How well does the project display explain the project? 7. Was the presentation done in a forthright manner, without tricks or gadgets? 8. Did the finalist/team perform all the project work, or did someone help?	
<b>TOTAL</b>	

Signature over printed name of the members of the board of judges

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

*P*



## FORMAT OF PAPER INVENTION REPORT

### Invention Report Paper:

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?

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:** You should always credit 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. For more information, you may visit the websites below:

- <http://www.chicagomanualofstyle.org/home.html>
- <http://www.calvin.edu/library/knightcite/index.php>

For more information about this event please contact Ms. Anna Liza Chan at [annaliza.chan@deped.gov.ph](mailto:annaliza.chan@deped.gov.ph) for details.



**FORMAT OF DISPLAY BOARD FOR THE INNOVATION EXPO**

**Sample Format of Display Board for Science Innovation Expo**

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 to humans?
Developer's Name	Who is/ are the inventors?

**Specifications:**

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

**Judging Criteria:**

The following **criteria** are used to evaluate each project:

- (a) Originality & Innovation ..... (30 %)
- (b) Community Connection & Impact ..... (25 %)
- (c) Functionality and Quality ..... (25%)
- (d) Utilization of Patent Information ..... (20%)

The following are the **members of the evaluation panel** in each level:

A group eight or more judges composed of the following listed below shall be members of the evaluation panel who will select the qualified winners in each level:

- (a) patent experts
- (b) industry experts
- (c) business experts
- (d) business professionals
- (e) scientists
- (f) field experts
- (g) regional/division supervisors

14



### MECHANICS FOR THE SCIENCE QUIZ

1. There shall be four (4) rounds for all categories: Easy, Average, Difficult and Clincher. There shall be ten (10) easy questions, five (5) average questions and five (5) difficult questions. All contestants shall answer all questions in the 3 rounds. Each correct answer in every round will be given corresponding points, to wit:

Easy	-	1 point
Average	-	2 points
Difficult	-	3 points
2. Each contestant shall provide his/her own Show Me Board, chalk and eraser/rug. Show Me Board is an illustration board with dimensions of 20 cm x 30 cm. The black portion of the board shall be used for the responses.
3. Each question must be answered within the time allocated for it. Ten (10) seconds for non-computational and thirty (30) seconds for computational.
4. The quizmaster shall read each question twice and the time shall start only after the quizmaster says, "go."
5. The contestants may begin to answer only after the quizmaster says "go"
6. The contestant must write his/her final answer on the answer sheet. If a contestant wishes to change his/her answer, the former answer should be crossed-out and the final answer encircled.
7. All answers must be spelled correctly to be considered correct. If the answer is a proper noun, capitalization of the first letter of the word is also a basis in declaring the answer, correct.
8. Questions shall indicate the number of significant figures for numerical answers. Use of calculators shall NOT be allowed.
9. After, the time limit has expired, each contestant must show his/her answer to the audience/judges before the quizmaster reads the correct answer. The proctors shall read and acknowledge whether the answer of each contestant is correct or not.
10. If the proctor cannot determine the validity of an answer, the Board of Judges must decide on the matter. The decision of the Board of Judges is **FINAL**.
11. Solutions may be checked by the Board of Judges, if needed.
12. The total score of a contestant after three rounds shall be his/her score.
13. The contestant with the highest final score shall be declared as the first place winner, the second highest, second place winner, the third highest as the third place winner and so on.
14. In case of a tie, a Clincher Round shall be played. It shall be a knockout system between or among the contestants with equal scores until a winner emerges. The first one who can answer correctly will be the winner.
15. The duly registered coach of the contestant is the only person authorized to file a protest. All protests should be referred to the Board of Judges before the quizmaster reads the next question. No protest shall be entertained by the Board of Judges when the quizmaster started reading the next question.
16. Any DepED personnel related by affinity or consanguinity (up to the third degree) to any contestant shall be disqualified in any of the committees involved in the planning and preparation of questions for the quiz nor can they act as coach of any contestant.
17. Any violation of the aforementioned rules shall cause the disqualification of the contestant concerned.



CRITERIA FOR STRATEGIC INTERVENTION MATERIAL

AREA	Percentage (a)	Rating Factor (b)	Score (a x b / 4)
<b>1. SUB-TASKING - 15%</b>			
• Competency-based	5%		
• Bloom's Taxonomy Followed	6%		
• SMAR-C	4%		
<b>2. CONGRUENCE - 15%</b>			
• Activities in line with content and skills	5%		
• Assessment in tune with content and skills	10%		
<b>3. USABILITY/FUNCTIONALITY - 45%</b>			
• Language	3%		
• Title Card	2%		
• Guide Card	4%		
• Activity Card	14%		
• Assessment Card	4%		
• Enrichment Card	4%		
• Reference Card	4%		
• Answer Card	2%		
• Packaging	8%		
<b>4. REPLICABILITY - 25%</b>			
• Validated before classroom use	5%		
• Developed material based on least learned competency	5%		
• Material used improved mastery level	10%		
• Handy and easy to copy	3%		
• Cost	2%		
TOTAL SCORE	100%		

Rating Factor:

- 1 – Least Evident
- 2 – Moderately Evident
- 3 – Evident
- 4 – Very Evident

*[Handwritten signature]*



**MECHANICS FOR THE POSTER MAKING CONTEST**

This Poster Making Contest is part of the Division Level Science and Technology Fair to involve the artistically inclined Learners and promote awareness in Science and Technology.

**A. MECHANICS:**

1. The Poster Making Contest is participated by the District's Top Three (3) winners in the following categories: Elementary, Junior High School, and Senior High School Category
2. The size of the poster should be 11" x 17" which will be provided by Division Committee
3. All needed materials must be provided by the participants during the contest day such as: Pencil, CrayPas, Permanent Marker and other materials
4. The poster must be done on the spot and must be completed within the allotted time of 1 hour and 30 minutes.
5. The product will be judged based on the following criteria:

CATEGORY	4	3	2	1	Score
Use of Time	Focused on getting the poster done in less than two hours. Never distracted others.	Focused on getting the poster done in two hours. Never distracted others.	There was some focus on getting the poster done but occasionally distracted others.	Did not use the time to focus on the poster OR often distracted others.	
Graphics - Originality	Several of the graphics used on the poster reflect a exceptional degree of student creativity in their creation and/or display.	One or two of the graphics used on the poster reflect student creativity in their creation and/or display.	The graphics are made by the student, but are based on the designs or ideas of others.	No graphics made by the student are included.	
Graphics - Relevance	All graphics are related to the topic and make it easier to understand. All borrowed graphics have a source citation.	All graphics are related to the topic and most make it easier to understand. All borrowed graphics have a source citation.	All graphics relate to the topic. Most borrowed graphics have a source citation.	Graphics do not relate to the topic OR several borrowed graphics do not have a source citation.	
Attractive-ness	The poster is exceptionally attractive in terms of design, layout, and neatness.	The poster is attractive in terms of design, layout and neatness.	The poster is acceptably attractive though it may be a bit messy.	The poster is distractingly messy or very poorly designed. It is not attractive.	
Graphics - Clarity	Graphics are all in focus and the content easily viewed and identified from 6 ft. away.	Most graphics are in focus and the content easily viewed and identified from 6 ft. away.	Most graphics are in focus and the content easily viewed and identified from 4 ft. away.	Many graphics are not clear or are too small.	
				TOTAL	

21

NSTF Scientific Review Committee (SRC)

## Review & Recommendation Report



Project Title : \_\_\_\_\_

**Fair Division:** ☐ Life ☐ Physical/Applied **Category:** ☐ Individual ☐ Team **Level:** ☐ Elementary ☐ Secondary

Instruction: Please put a check (✓) in the appropriate column and if necessary, write recommendations on the space provided.

	COMPLETE	INCOMPLETE	RECOMMENDATIONS
<b>PART 1: REQUIRED FORMS FOR ALL RESEARCHES</b>			
1. Checklist for Adult Sponsor (1). Is it accomplished and signed?			
2. Student Checklist 1A. Is it complete and signed?			
If answer to item 5 is <b>YES</b> , must also have Form 7 (See Part II, item 13 below)			
If answer to item 7 is <b>Research Institution or Other</b> , must also have Form IC (See Part II, item 6 below)			
3. Research Plan (Attachment to item 2, above). Does it include the following?			
A. <b>RATIONALE.</b> Does it Include a synopsis of background information 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. <b>HYPOTHESIS(ES), RESEARCH QUESTION(S), ENGINEERING GOAL(S), EXPECTED OUTCOMES.</b> Is this based on RATIONALE?			
C. <b>RESEARCH METHODS AND CONCLUSIONS</b>			
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. <b>BIBLIOGRAPHY.</b> Does it have at least 5 major references? If using vertebrate animals, include 1 reference on animal care. (Chicago Manual of Style)			
<b>Note: Items 3.E-H are needed ONLY for researches on HUMAN PARTICIPANTS, VERTEBRATE ANIMAL, POTENTIALLY HAZARDOUS BIOLOGICAL AGENTS (see attached Research Plan/Project Summary Instructions)</b>			
E. HUMAN PARTICIPANTS RESEARCH. Does it provide for the following?			
a. Potential ALTERNATIVES to vertebrate animal use			



	COMPLETE	INCOMPLETE	RECOMMENDATIONS
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			
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 (BSL) Assessment and determination b. Source of agent, specific cell line. c. Safety precautions d. Methods of disposal			
H. HAZARDOUS CHEMICALS, ACTIVITIES and DEVICES. Does it provide for the following? a. Risk Assessment process and 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			
<b>VERY IMPORTANT 2: See Part II, Risk Assessment (3) for I</b> 1. Studies involving 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 must be properly disposed. 4. Studies involving decomposition of vertebrate organisms (such as in forensic projects). Studies with microbial fuel cells.			
<b>PART 2: ADDITIONAL REQUIRED FORMS</b>			
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. <b>Is it properly accomplished and signed by the DESIGNATED SUPERVISING ADULT?</b>			
7. Qualified Scientist Form (2)- for researches with human participants, vertebrate animals, potentially hazardous biological agents, Drug Enforcement Administration (DEA)-controlled substances; completed and signed BEFORE start of experimentation. <b>Is it properly accomplished and signed by the QUALIFIED SCIENTIST?</b>			

	COMPLETE	INCOMPLETE	RECOMMENDATIONS
8. Risk Assessment Form (3)- for researches using hazardous chemicals, activities or devices and microorganisms exempt from preapproval. Must be completed BEFORE experimentation. Is it properly accomplished and signed by DESIGNATED SUPERVISING ADULT OR QUALIFIED SCIENTIST (when applicable)?			
9. Human Participants Form (4) - for researches involving human participants not at a Regulated Research Institution. Did the DESIGNATED ADULT SUPERVISOR/ INSTITUTION approve the research BEFORE experimentation?			
10. Vertebrate Animal Form (SA) -for researches involving vertebrate animals that is conducted in a school/home/field research site. A. Is it properly accomplished, approved and signed by SRC BEFORE experimentation? B. Is it properly accomplished, approved and signed by DESIGNATED VETERINARIAN BEFORE experimentation? C. Is it properly accomplished, approved and signed by DESIGNATED SUPERVISOR OR QUALIFIED SCIENTIST (as applicable) BEFORE experimentation?			
11. Vertebrate Animal Form (SB) - for researches 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?			
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/Institutional Biosafety Committee (IBC) approval BEFORE experimentation? B. Is it properly accomplished, approve and signed by a QUALIFIED or DESIGNATED SUPERVISOR BEFORE experimentation? C. Is it properly accomplished, approved and signed by the SRC BEFORE experimentation? D. Human Vertebrate Animal Tissue Form (68)- for researches 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 researches 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?			
13. Continuation/Research Progression Projects Form (7)- for researches that are a continuation/progression in the same field of study as a previous research. A. This form MUST be accompanied by the PREVIOUS YEAR'S ABSTRACT and RESEARCH PLAN B. Is it properly accomplished, approved and signed by the student/s?			
<b>PART 3: RESEARCH PAPER (See attached IMRAD Format)</b>			
1. Cover Page			



	COMPLETE	INCOMPLETE	RECOMMENDATIONS
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)			
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?			
3. METHOD. Does it clearly and comprehensively provide the reader with a description of the methods used in the research?			
4. RESULTS. Does it clearly and comprehensively 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?			
<b>PART 4: RESEARCH ABSTRACT (MAX. 250 WORDS)</b>			
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 were working b. Self-promotions and external endorsements c. Inclusion of work or procedures done by the mentor			
<b>PARTS 5: RESEARCH LOGBOOK</b>			
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

Prepared by: \_\_\_\_\_

PROGRAM SCHEDULE MATRIX

Time	Day 1 (October 19, 2018)	Day 2 (October 20, 2018)
7:30 – 8:30		
8:31 – 12:00		Opening Program  On-Site Interview for the <ul style="list-style-type: none"><li>• Science Investigatory Project</li><li>• Invention/Innovation Expo</li><li>• Strategic Intervention Material</li></ul> Simultaneous Conduct of Contest <ul style="list-style-type: none"><li>• Science Quiz</li><li>• Poster Making Contest</li></ul>
12:01 – 1:00		LUNCH BREAK
1:01 – 2:00		Announcement of Top 3 Qualifiers for <ul style="list-style-type: none"><li>• Science Investigatory Project</li><li>• Science Invention/Innovation</li><li>• Science Intervention Material</li></ul>
2:01 – 3:00		Simultaneous Conduct of <ul style="list-style-type: none"><li>• Science Congress<ul style="list-style-type: none"><li>- Life Science</li><li>- Physical Science</li><li>- Robot and Intelligent Machines</li></ul></li><li>• Judging of SIM and Invention/Innovation</li></ul>
3:01 – 4:00	Setting-Up of Project	
4:01 – 5:00		Closing Program/ Awarding Ceremony





**WORKING COMMITTEES AND CONTEST ADMINISTRATORS**

Committee	Persons Involved/Assignment
Program and Invitation	Chairperson : Rodrigo A. Bentulan Members : Floramie N. Macapaz Marilou T. Estorba
Registration, Attendance and Results Tabulator	Chairperson : Mary Ann P. Enriquez Members : Lucila B. Booc Maria Shiela C. Lingatong
Foods	Chairperson : Amabel M. Velos Members : Soledad B. Amado Noveim T. Leoligao
Tokens, Trophies, Certificates and Awards	Chairperson : Beverly S. Baguio Members : Maria Fe G. Decatoria Concepcion V. Garzota
Venue and Accommodation	Chairperson : Ina Irish C. Malazarte Members : Reyna May E. Dolera Deborah T. Lopez
Sounds	Chairperson : Maria Fe G. Decatoria Member : Raquel A. Lugo Sheila P. Alpuerto
Newsletter and Documentation	Chairperson : Nova S. Sebarios Member : Ruby L. Armada Mary Ann S. Dapitan
Decoration	Chairperson : Ceasar Anthony Q. Arong Members : Marjorie B. Del Rosario Nonah Mae T. Espina
SIP-Life Science	Administrator : Fe M. Gultiano Asst. Admin : Ilma M. Ariola
SIP-Physical Science	Administrator : Mercedita A. Sumalinog Asst. Admin : Maria Fe G. Decatoria
SIP-Robotics and Intelligent Machines	Administrator : Garvin Q. Velos Asst. Admin : Jennifer S. Mirasol
Science Innovation Expo	Administrator : Eduardo T. Ursal Asst. Admin : Ernesto E. Petiluna
Science Quiz – Grade 1-3 (Key Stage 1)	Administrator : Vivien S. Taneo Asst. Admin : Arlene T. Sumalinog
Science Quiz – Grade 4-6 (Key Stage 2)	Administrator : Czarina Ritzko J. Sagarino Asst. Admin : Airene Godinez
Science Quiz – Grade 7-10 (Key Stage 3)	Administrator : Ma. Mariza A. Maglangit Asst. Admin : Fe G. Decatoria
Science Quiz – Grade 11-12 (Key Stage 4)	Administrator : Angelita D. Pagobo Asst. Admin : Concepcion Garzota
Poster Making Contest	Administrator : Gil Limpangog Asst. Admin : Leonardo Mar
Strategic Intervention Material - Elem	Administrator : Valentina A. Abing Asst. Admin : Leonor A. Pantollano
Strategic Intervention Material - JHS/SHS	Administrator : Renato L. Paquibot Asst. Admin : Susan Obiedo