



Regional

Science and Math Festival

November 26-27, 2015
Baguio City High School, Baguio City

Theme:

“Environmental Protection and Conservation of the Ecosystem”

Guest Speaker:

HON. MAURICIO G. DOMOGAN
City Mayor, Baguio City

2015 REGIONAL SCIENCE AND MATH FESTIVAL

Baguio City

November 25-28, 2015

November 25, 2015

5:30 PM - Meeting of EPS, Coaches
and Technical Working Group

Venue - Baguio City High School Auditorium

PART I. OPENING PROGRAM

November 26, 2015

Assembly Time 8:00-8:30 A.M.
(BCHS School Ground)

Entrance to the Auditorium 8:30 A.M.
Program 9:00 A.M.

Order of Delegation

1. Abra Delegation
2. Apayao Delegation
3. Benguet Delegation
4. Ifugao Delegation
5. Kalinga Delegation
6. Mountain Province Delegation
7. Tabuk city Delegation
8. Baguio City Delegation and Visitors

OPENING PROGRAM

- I. National Anthem
- II. Doxology
- III. Cordillera Hymn
- IV. Presentation of Delegates

V. Welcome Remarks

VI. Intermission Number

VII. Introduction of the Guest Speaker

VIII. Inspirational Message

IX. Presentation of Judges

X. Raising of Banners

XI. Message and Declaration of the
Formal Opening of the 2015
Science and Math Festival

XII. General Orientation

BCHS - Special Program in the Arts
BCHS – Special Program in the Arts
BCHS – Special Program in the Arts

JACQUELINE G. LAMPAC

EPS-Science , Baguio City

FRANCIS CESAR B. BRINGAS, CESO VI
Schools Division Superintendent

BCHS - Special Program in the Arts

FLORIDA C. LANGGAS

Head Teacher VI-English (BCHS)

Hon. MAURICIO G. DOMOGAN

City Mayor, Baguio City

Science

ETHIELYN E. TAQUED, Ed.D.,

EPS-LRMDS

Mathematics

PIO D. ECUAN , Ed.D.,

Chief -CLMD

Division Delegation Heads /
Representatives

ELLEN B. DONATO, Ed.D. , CESO III
Regional Director, DepEd-CAR

FRANCISCO C. COPSIYAN

EPS – Mathematics , Baguio City

PART II. CONTEST PROPER

MASTER OF CEREMONY

2015 REGIONAL SCIENCE AND MATH FESTIVAL
 Baguio City High School, Baguio City
 November 25-28, 2015

BILLETING SCHOOLS

Delegation	Host School	Host District
1. Abra	Mabini Elementary School	Mabini District
2. Apayao	Manuel L. Quezon Elementary School	Quezon District
3. Baguio City	Baguio City High School- DECS Building (Grade 10)	Baguio City High District
4. Benguet	Baguio City High School – Flavier Building (Grade 7)	
5. Ifugao	Baguio City High School – ESF Building (Grade 8)	
6. Kalinga	Baguio Central School	Baguio Central District
7. Tabuk city		
8. Mt. Province	Josefa Carino Elementary School	West Baguio Central District
9. Regional Office	Baguio City High School K-12 Building	DepEd Nurses

2015 REGIONAL SCIENCE AND MATH FESTIVAL
 Baguio City High School, Baguio City
 November 25-28, 2015

SCHEDULE OF ACTIVITES

TIME	November 25, 2015	November 26, 2015	November 27, 2015
8:00- 8:30		Assembly of Participants at the Baguio City High School Ground	Awarding of Winners per event
8:30-9:00		Entrance to the BCHS Auditorium	Continuation of Unfinished Activities
9:00		Opening Program	
10:30-10:45	Break	Preparation of Contest Venues	Election of New Set of Officers of Math and Science Teachers Associations
10:45-12:00			
12:00-1:00	H E A L T H B R E A K		
1:00 pm -3:00 pm	Arrival of Participants *Registration c/o Billeting Schools	Contest Proper	Continuation of Unfinished Activities
5:30 pm— 6:30 pm	* Investigatory Project Display *Meeting of EPS/ Coaches/ Technical Working Group Venue: BCHS Auditorium		*Damath & Sci-Drama Competitions *Science and Math Quiz *Viewing of Investigatory Projects *Oral Defense of Investigatory Projects
3:00 pm -4:30 pm	Welcome Program c/o Host Schools		Home Sweet Home

CONSULTANTS

Name	Position
Ellen B. Donato Ed., D., CESO III	Regional Director
Estela L. Carino, Ed.,D., CESO V	Asst. Regional Director
Francis Cesar B. Bringas, CESO VI	Schools Div. Superintendent
Atty. Augustin P. Laban III	OIC - Asst. Schs. Div. Supt.
Pio D. Ecuana, Ed.D.	Chief-CLMD
Ethielyn E. Taqued, Ed.D.	EPS –LRMDS/ Science

NAME	POSITION	DIVISION
Ronald B. Castillo, CESO VI	SDS	Abra Division
Federico P. Martin CESO VI	OIC -SDS	Benguet Division
Amador Garcia	OIC-SDS	Apayao Division
Marie Caroline B. Verano, CESO VI	SDS	Kalinga Division
Francis Cesar B. Bringas, CESO VI	SDS	Baguio City Division
Sally B. Ullalim, CESO V	SDS	Ifugao Division
Felipe L. Ballitoc	OIC-SDS	Tabuk City Division
Gloria B. Buya-ao	OIC-SDS	Mt. Province Division

MATHEMATICS	DIVISION	SCIENCE
Lemuel Dickson	Abra	Bhenjo P. Agoloos
Rolly Pascua	Apayao	Tita B. Andaya
Francisco C. Copsiyan	Baguio City	Jacqueline G. Lampac
Wilfred C. Bagsao	Benguet	Mila T. Caliging
Silverio W. Tawatao	Kalinga	Apolonia G. Dalanao
Dolores Anecang	Mt. Province	Valeria Gullod
Marciana M. Aydinan	Ifugao	Jane T. Dulawan
Emmanuel C. Abuan (Coordinator)	Tabuk City	Mildred C. Cabay

JUDGES FOR SCIENCE INVESTIGATORY PROJECTS & SIMS

Event	Individual	Team
A. Science Investigatory Projects Elementary	1. Dr. Osmund Belmonte 2. Sheil Marie Singa - Claver 3. Dr. Leilanie A. Parugpug	1. Dr. Maryminda Odiem 2. Engr. Max Codamon 3. Engr. Keth Jimson Mangusan
Secondary - Life Science	1. Mr. Nero M. Paderes 2. Ms. Jasmin L. Donaal 3. Dr. Teodora A. Balangcod	1. Dr. Elbert Sana 2. Dr. Lloyd V. Orduña 3. Dr. Rosemary M. Gutierrez
Secondary – Physical Science	1. Dr. Rafael Padre 2. Engr. Petra Cadawan 3. Dr. Norbeto Cobaldez	1. Mr. Vicente A. Ato Dr. Quantum Yuri B. Lubrica Dr. Debbie Glen Vicera Manangkil
B. Math Investigation Individual and Team Cluster 1 and 2	1. Ms. Wilma G. Adawan 2. Mr. Bryan A. Hidalgo 3. Mr. Reymart Lagunero	
	Elementary	Secondary
C. Strategic Intervention Materials (SIM –Teachers' Category)	1. Dr. Lilia B. Goc-oban 2. Mr. Apler J. Bansiong 3. Dr. Tules P. Banwa	1. Dr. Oscar Bautista 2. Dr. Wilfredo B. Bambico 3. Dr. Helen Bais
D. Math - SIM (Elementary and Sec.)	1. Dr. Marjorie T. Valdez 2. Ms. Michelle D. Dicang 3. Mr. Marlon Y. Palbusa	
E. Math Action Research (Elementary and Sec.)	1. Dr. Zenaida Garambas 2. Mr. Ryan Saingan 3. Ms. Janet Lyn S. Montemayor	

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TECHNICAL WORKING GROUP

Function / Event	Elementary	Secondary
SCIENCE		
Strategic Intervention Materials (SIM –Teachers' Category)	Jane Butale	Efren Matthew de Peralta
Science Investigatory Project	Beatriz Domong-as and Jesusa Biggayan (Team)	Physical Science Denia Wacang (Team) Gloria Codamon (Individual)
	Adoracion Tombali Cresencia Naoy (Individual)	Life Science Wanda Lyn Pladio (Team) Divina Mendoza (Individual)
SCI-DAMA - Chief / Arbiter	Nelson Daculog	Darwin Paas
Arbiters	Reynaldo Tumapang Richard Sinsim Donald Lid-ayan Leoanard Egan Vincent Depayso	Dexter Martinez Clarence Binwag Pepito Dacaimat Jovy Rose Abuda Amor Parista Max Dumayas

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TECHNICAL WORKING GROUP

Function / Event	Elementary	Secondary
MATHEMATICS		
Action Research in Math	Hermoso Bunnol	Lilybeth Balutoc
Strategic Intervention Materials	Romulo Basa	Jonathan Batara
Mathematics Investigations		Marissa Dominga Noble (Team) Luisita Parilla (Individual)
Damath-Tournament Managers	Wilfred C. Bagsao Emmanuel Abuan	
Chief Arbiters	Mark Binay-an	Nestor Dalay-on
Arbiters	Goerge Vidal Jomar Brub Maricel Enciso Gilbert Cherweg Joemar Soraino	Robert Pucdihon Limson Dumogo Joel Tullias Jonathan de la Cruz Eljun Arisga
Quiz Bee Quiz Master	Marciana Aydinan	
Quiz Bee - Judges	Silverio Tawatao Lemuel Dickson	
Quiz Bee - Proctors	Dolores Anecang Rolly Pascua	
Overall Consolidators	Warly Kindiawan	Laureen B. Likigan
Monitoring and Evaluation	Emma Gabol (HRDD)	Fely Badival



REGIONAL MEMORANDUM

NO. **191.2015**

To : Schools Division Superintendents
All Divisions

From : **ELLEN B. DONATO, ED. D., CESO III**
Director IV

Subject : **2015 REGIONAL SCIENCE AND MATH FESTIVAL**

Date : October 12, 2015

RELEASED
OCT 13 2015
DEPED-CAR Time:

- The DepEd-CAR in coordination with the Math and Science Teachers Organizations will conduct the 2015 Regional Math and Science Festival on November 25-28, 2015 at **Baguio City National High School, Baguio City** with the Theme: **Environmental Protection and Conservation of the Ecosystem.**
- This annual academic competition aims to promote Science and Technology consciousness among the youth and identify the most creative/innovative and the best Science and Technology researchers who will represent the region to the National Science and Technology Fair. The schools are encouraged to promote Science, Technology investigatory projects and Mathematics investigations that will address the **environmental protection and conservation of the ecosystem.**
- The competed events are the following:
 - SCIENCE EVENTS**

Events Contested	Category/ Level	Number of Participants/Entries
Science Investigatory Project		
Elementary	Individual	5 projects per division
	Team (Minimum of 2 maximum of 3 members)	5 projects per division
Secondary	Life and Categories Team and Individual	5 projects per division per category Total of 10 projects
	Physical Science Team and Individual	5 projects per division per category Total of 10 projects
Science Quiz		
Elementary	Grade 3 to Grade 6	1 first placer per grade level
Secondary	Grade 7 to Grade 10	1 first placer per grade level
Strategic Intervention Materials		
Teachers Category	Grade 3 to Grade 6	1 first placer per grade level
Teacher Category	Grade 7 to Grade 10	1 first placer per grade level
Sci-Dama		
Water Patrol	Grade 3 and 4	1
Power Patrol	Grade 5 and 6	1
Electro-Scidama	Grade VII	1
Sci-Not Scidama	Grade VIII	1
THI Scidama	Grade IX	1
Thermo-Scidama	Grade X	1

MATHEMATICS EVENTS

Events Contested	Category/ Level	Maximum Entries/ Participants
A. Damath Elementary		
1. Whole Number Damath	(Grade 3 or 4)	1
2. Positive Fraction Damath	(Grades 5 or 6)	1
B. Damath Secondary		
1. Integer Damath	Grade 7	1
2. Signed Fraction Damath	Grade 8	1
3. Radical Math	Grade 9	1
4. Polynomial Damath	Grade 10	1
C. Mathematics Quiz Elementary		
1. Individual	written	1
2. Team	oral	2
D. Mathematics Quiz Secondary		
3. Individual	written	1
4. Team	oral	2
E. Action Research in Mathematics – Elementary		
F. Action Research in Mathematics – Secondary		
G. Strategic Intervention Materials – Elementary		
H. Strategic Intervention Materials- Secondary		
I. Mathematics Investigation		
Secondary only		
1. Cluster 1- Regular Class	Individual Category	3 projects
2. Cluster 1	Team Category	3 projects (3 or 2 per team)
3. Cluster 2 – STE/CRSHS	Individual Category	3 projects
4. Cluster 2	Team Category	3 projects (3 or 2 per team)

Note:

- o The use of calculator in Damath and Sci-Not Scidama is allowed.
 - o There shall be different participants for the individual and team categories.
 - o Submit three (3) copies each of Action Research, SIM, and Mathematics Investigation for (3) judges to the Curriculum and Learning Management Division (CLMD) on or before October 30, 2015. Projects received after the said date will not be included in the judging.
- Points system will be applied to determine the over-all ranking of the divisions. 1st place 10 points; 2nd place 8 points; 3rd place 6 points; 4th place 5 points; 5th place 4 points; 6th place 3 points; 7th place 2 points and 8th place 1 point.
 - The Mechanics and Guidelines of the competitions are found in enclosure No. 1. Enclosure No. 2 is the composition of the people involved and the TWG of the said activity. Enclosure 3 is the National Science and Technology Fair Guidelines.
 - Participants shall be charged a registration fee of **Php 550.00** to cover administrative cost, honorarium of judges, extra essential services, and other incidental expenses. **Meals and snacks shall be taken care of by each division.** All expenses relative to the conduct of this activity shall be charged against local funds and other sources subject to the usual accounting and auditing rules and regulations. Participants are requested to bring their sleeping paraphernalia and personal amenities.
 - The arrival of the Division delegates is on November 25, 2015. Coordination meeting of Management and Working Committees will be held at Baguio City National High School on November 25, 2015 at 6:00 PM.
 - Parade starts 8:00 in the morning of November 26, 2015. Opening Program follows immediately after the parade.

Immediate and wide dissemination of this memorandum is advised.

Guidelines and Mechanics for the Different Festival Competition.

A. Regional Science Investigatory Projects and Mathematics Investigation

1. Science Research Competition

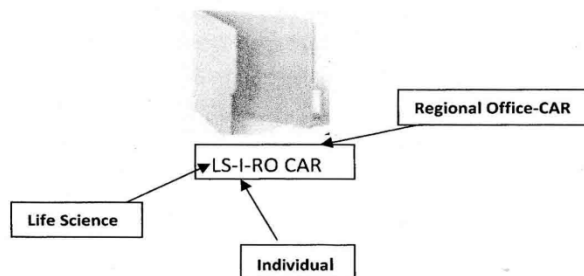
- a. Below are the classifications and categories of the science research for the Junior High School Level.
- b. Classification for the Science Investigatory projects are as follows:

<p>Entries shall come from the eight divisions in CAR and the Regional Science High School (CRSHS) will be treated as one Division (for SIP only) , while the Philippine Science High School (PSHS) projects shall go directly to National Screening.</p>			
<p>Life Science Junior High Level</p>		<p>Physical Science Junior High Level</p>	
<p>Individual Project</p>	<p>Team Project</p>	<p>Individual Project</p>	<p>Team Project</p>
<p>Elementary Level</p>			
<p>Individual Project</p>		<p>Team Project</p>	

For more details on project category ideas please visit www.societyforscience.org/isef/students/project_categories

The Division level **top five** projects for each category will participate in the regional competition.

There will be four (4) Regional Level **first place** winners in the Life and Physical categories to represent the region to the National Science and Technology Fair on February 8-12, 2015 at avenue to be announced later. The **national participants** (Regional first winners) shall arrange their projects based on the following example in soft copies to be submitted to the Region **November 30, 2015** to be submitted to NSF Screening Committee:



Folder Code	Content of the Folder	Sample content of the folder for Forms
LS-I-RO1 *life science-individual-region 1	Manuscript: LS-I-RO1-School Name	-
	Folder containing the needed forms: LS-I-RO1-Forms *name of the folder where all the soft copies of the necessary forms are found	LS-I-RO1-Form1 LS-I-RO1-Form 2 LS-I-RO1-Logbook

- c. The Regional science research competition for the **elementary level** will be in two categories the **Individual and Team categories**. Projects will no longer be classified as life science or physical science. The top five projects (no ties) in the Division level will participate in the regional competition.

The Science Research Project

Science research projects must conform with international rules published by the *Intel International Rules for Pre-college Science Research: Guidelines for Science and Engineering Fairs 2015*. Each project is expected to have a Research Adviser and an Institutional Review Board (IRB) or a Scientific Review Committee (SRC).

For the National Level, the research project should cover a maximum of twelve (12) continuous months from January 2014 to December 2014. However, since the National STF is in the first week of February, then the complete write-up should have been submitted to the **National SRC by November 30, 2015**. The first placers in the Regional Level for every category will be screened to fulfill the national requirement for National S&T Competitions: *The participation of schools in the National STF shall be clustered into two types, Life Science and Physical Science. All Math –related projects shall join in the Physical Science Category.* Thus only four projects shall move to the National STF.

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 for the competition.

B. Guidelines of Math and Science Quiz

The Math Quiz will be composed of Easy (to be solved mentally), Average, and Difficult questions to be answered with a written solution in papers to be distributed during the event. "Clincher" or "Do or Die" questions will be given in case of ties. Science Quiz will be composed of Easy, Average (in multiple choice type) but not for the Difficult and Clincher questions.

Subject Area	Easy	Average	Difficult	Clincher/Do or Die
Math	15 seconds	30 seconds	60 seconds	To be announced by the Quiz Master
Science	10 seconds	15 seconds	30 seconds	

For Math Quiz: The Individual Category will be in written form while Team (Elementary and Secondary) category will be done orally.

- a. The regional Math (Team Category) and Science Quiz shall be conducted in a Quiz show format wherein all contestants are seated facing the stage while Math quiz individual category shall be in written.
- b. There shall be Easy, Average, and Difficult rounds of five (5) questions per category. Each correct answer for the Easy round is given two (2) points, Average round three (3) points, and Difficult round five (5) points. In case of tie/s, clinchers / Do or Die questions will be given until the tie is broken. Each contestant will be given answer sheets to write their answers.
- c. The Quiz Master will read the question twice. After the second reading, the Quiz Master will say "GO" and the time to start writing their answer will begin. The buzzer sounds after the given time limit and the contestants will raise their answers for recording and verification by the proctors and Board of Judges.
- d. If the proctor cannot determine the validity of the answer, the Board of Judges will decide on the matter. The decision of the board of judges is final.
- e. The duly registered coach of the contestant is only the authorized person to make a protest. **All protests should be referred to the board of judges before the Quiz Master reads the next question.** No protests will be entertained after the Quiz Master has read the next question.
- f. Any violation of the aforementioned rules shall cause the disqualification of the contestant/s concerned

C. DAMATH/SCIDAMA RULES

1. Set the starting positions of the chips.
2. The two players alternately will take turns in moving a piece (pass is not allowed).
3. Touch move shall be observed in the games. A player who touches a chip is required to move that chip unless it is an illegal move.
4. After making a move, a player shall record his/her move in the score sheet.
5. Only one score sheet will be used by the players in a game.
6. Each player is allowed one minute to move, record the move and score.
7. A warning is given to a player by the arbiter if no move is made in one minute, and consequently, is forced to move a chip.
8. Continuo us violation of rule #7 will mean disqualification (after 3 warnings) of the player even if he is leading in the score sheet.
9. All moves should be in the forward direction except when taking a chip or the chip is "dama".
10. A chip is declared "dama" if it reaches and stops in any of the following opponent's square:
(1,0) (3,0) (5,0) (7,0)

Similarly, if an ordinary opponent's chip reaches the following squares, it is declared as "dama".
(0,7) (2,7) (4,7) (6,7)

11. Once a piece/chip is declared as a "dama", it could slide diagonally forward or backward in any vacant square. If a "dama" takes a chip, the score is doubled, similarly if a chip takes a "dama" the score is also doubled. If the "dama" takes a "dama", the score is quadrupled.
 12. In taking chip/chips, the following shall prevail:
"Mayor dama"
"Mayor dalawa"
"Mayor tatlo", etc.
 13. "Dama" chip should be encircled in the score sheet to identify the "dama".
 14. Games duration should not exceed twenty minutes.
 15. The game also ends if:
 - The moves are repetitive
 - A player has no more chips to move
 - A player has no more chips
 - A player resigns.
- "Save by the bell"** is not applicable in the end game. Continuation of the move shall be enforced when taking a chip/s.
16. The remaining chip/chips of a player is/are added to his total score algebraically.
 17. If the remaining chip is a "dama", the value is doubled.
 18. The player with the greater total score wins the game, except in the sci-dama when the player with lesser score wins.
 19. Only players are allowed to raise questions during the game through the arbiter and questions should be settled immediately. No questions will be entertained after the game.
 20. Arbiter's decision is final.

Technical Working Group

Function/ Event	Elementary	Secondary
Strategic Intervention Materials in SCIENCE (teacher category)	Jane Butale	Efren Matthew de Peralta
Elementary Science Investigatory Project	Beatriz Domong-as and Jesusa Biggayan (Team)	Adoracion Tombali Cresencia Naoy (Secondary)
Secondary Physical Science	Denia Wacnag (Team)	Gloria Codamon (Individual)
Secondary Life Science	Wanda Lyn Pladio (Team)	Divina Mendoza (Individual)
Chief Arbiter (Scidama)	Nelson Daculog	Darwin Paas
Arbiters	Reynaldo Tumapang	Dexter Martinez
	Richard Simsim	Clarence Binwag
	Donald Lid-ayan	Allan Litaoen
	Leonardo Egalan	Jovy Rose Abuda
	Vincent Depayso	Amor Parista
	George Vidal	Max Dumayas
MATHEMATICS		
Action Research in Math	Hermoso Bunnol	Lilybeth Balutoc
Strategic Intervention Materials	Romulo Basa	Jonathan Batara
Mathematics Investigations		Marissa Dominga Noble (Team) Luisita Parilla (Individual)
Damath Tournament Managers	Wilfred C. Bagsao Emmanuel Abuan	
Chief Arbiters	Mark Binay-an	Nestor Dalay-on
Arbiters	Goerge Vidal Jomar Brub Maricel Enciso Gilbert Cherweg Joemar Soraino	Robert Pucdihon Limson Dumogo Joel Tullias Jonathan de la Cruz Eljun Arisga
Quiz Bee Quiz Master	Marciana Aydinan	
Quiz Bee - Judges	Silverio Tawatao Lemuel Dickson	
Quiz Bee - Proctors	Dolores Anecang Rolly Pascua	
Overall Consolidators	Warly Kindiawan	Marvin John Flores
Monitoring and Evaluation	Emma Gabol (HRDD)	Fely Badival

Note

TWG should be guided by the guidelines for each event and facilitating of immediate returns of results for tallying.

National Science and Technology Fair Guidelines

1. Levels of Competition

School/Division Level

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

1. RESEARCH PLAN

2. FORMS for all the projects

- Checklist for Adult Sponsor
- Student Checklist (1A)
- Research Plan (NOTE: No need to attach the Research Plan Instructions)
- Approval Form (1B)
- Regulated Research Institutional/Industrial Setting Form (1C)

3. FORMS depending on the type of research (e.g involving humans, vertebrate animals, hazardous chemicals, etc.)

- Qualified Scientist Form (2)
- Risk Assessment Form (3)
- Human Participants Form (4)
- Human Informed Consent Form
- Vertebrate Animal Form (5A)
- Vertebrate Animal Form (5B)
- Potentially Hazardous Biological Agents Risk Assessment Form (6A)
- Human and Vertebrate Animal Tissue Form (6B)
- Continuation Project Form (7)

4. Abstract (Maximum of 250 words)

The abstract should include the following:

- Purpose of the experiment
- Procedure
- Data conclusion
- The abstract may NOT include the following:
 - Acknowledgement
 - Work of procedures done by the mentor

5. Research Paper (Include the Title Page, Abstract, Main Body, and References)

6. Project Evaluation Form (see Enclosure #8)

7. Scanned copy of the log book

Project of proponents should have been screened by the 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 Science/Mathematics Supervisor shall be a member of the BOJs who shall determine the school/division winners of the different categories and fair divisions.

Winners at the school level should be officially endorsed to the Division for the division level. Likewise, the division level winners should be officially endorsed to the region.

Regional Level

The first place winners at the division level in both clusters shall have been properly scrutinized by identified members of the SRC for the regional level competition.

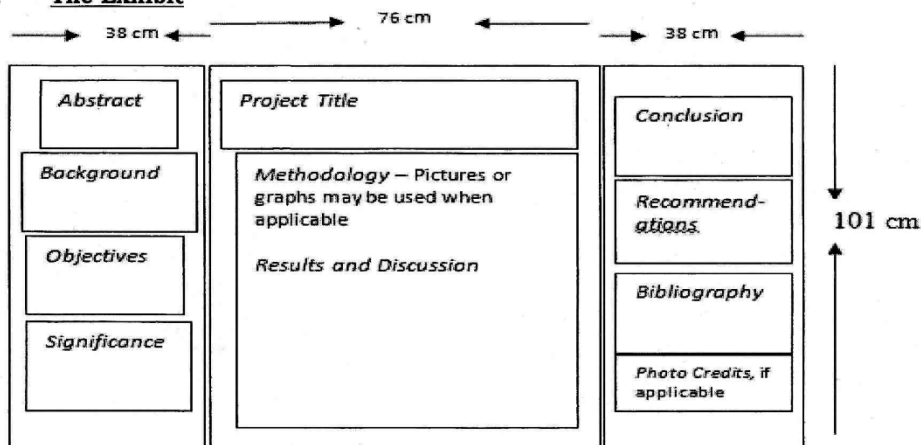
The Official List of the first **place winners at the regional level**, report on the conduct of S&T Fair, soft copies of the manuscripts and other necessary documents shall be officially endorsed by the Regional Office to DepEd Central Office through the Bureau of Secondary Education. The soft copies must be saved in the CD containing 4 folders representing the four categories. Each folder must contain the manuscripts in PDF Format and another folder containing all the required forms including the scanned copies of the research logbook.

2. The Research Project

Science research projects must conform with international rules published by the *Intel International Rules for Pre-college Science Research: Guidelines for Science and Engineering Fairs 2015-2016*. 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 2015 to December 2015.

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 for the competition.

3. The Exhibit



3.1 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 Regional level as well as in the National STF in support of the environmental advocacy of the government in reducing the consumption of non-biodegradable or non-recyclable materials. Use illustration boards and size should follow the measurement given in this memorandum.**

The safety regulations that must be adhered to should be consistent with the guidelines found on page 23 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, 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.*

3.2 Requirements for presentation by the Project Proponent/s to the BOJs 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: <http://www.societyforscience.org/document.doc?id=12>)

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. These rules can be found in the Guidelines (<http://www.societyforscience.org/isef/rulesandguidelines>) and in the Student Handbook (<http://www.societyforscience.org/document.doc?id=12>).

- 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 you will use 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 include any documentation that is not your own (i.e. books, journal articles, websites, etc.). See an appropriate reference in your discipline for format or refer to the Instructions to Authors of the appropriate publication.

Three common reference styles are:

1. **APA (American Psychological Association) Style :**
 - o [-http://apastyle.apa.org/](http://apastyle.apa.org/)
 - o [-http://www.calvin.edu/library/knightcite/index.php](http://www.calvin.edu/library/knightcite/index.php)
 - o [-http://owl.english.purdue.edu/owl/section/2/10/](http://owl.english.purdue.edu/owl/section/2/10/)
 - o *This resource offers examples for the general format of APA research papers, in-text citations, endnotes/footnotes, and the reference page.*

MLA (Modern Language Association) Format:

- o [-http://www.mla.org/style](http://www.mla.org/style)
- o [-http://www.calvin.edu/library/knightcite/index.php](http://www.calvin.edu/library/knightcite/index.php)
- o [-http://owl.english.purdue.edu/owl/section/2/11/](http://owl.english.purdue.edu/owl/section/2/11/)
- o This resource offers examples for the general format of MLA research papers, in-text citations, endnotes/footnotes, and the Works Cited page.
- o The Chicago Manual of Style:
- o <http://www.chicagomanualofstyle.org/home.html>
- o [-http://www.calvin.edu/library/knightcite/index.php](http://www.calvin.edu/library/knightcite/index.php)

The Chicago Manual of Style presents two basic documentation systems. The more concise author-date system has long been used by those in the physical, natural, and social sciences. In this system, sources are briefly cited in the text, usually in parentheses, by author's last name and date of publication. The short citations are amplified in a list of references, where full bibliographic information is provided.

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 28 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.

Cordillera Hymn

Cradled by majestic mountains
Blest with nature's flowing fountains
Blowing flow'rs and verdant hills
Is a region of murm'ring rills

Here dwell freedom loving people
Strong our bond it's hard to topple
For our freedom we rise and fight
Our priceless ancestral birthright

Refrain:

Cordillera, region of wonder hail
Beloved land, your name we shall not fail
Honor and fame to you we'll strive to bring
Your glory won we shall forever sing

'Neath the sky the rain may gather
Angry clouds may craz'ly wander
But the sun shines forever fair
As we climb up the golden stair

Dreams of peace of oneness and progress
Cherished goals our regions' praises
Striving to build a brighter dawn
For our children to call their own

Refrain:

Cordillera, region of wonder hail
Beloved land, your name we shall not fail
Honor and fame to you we'll strive to bring
Your glory won we shall forever sing





MESSAGE

In behalf of my family, the people and officialdom of Baguio City, we would like to extend our warmest greetings and congratulations to the officials and employees of the Department of Education Division of City Schools and the officers and members of the Math and Science Teachers Organization on the occasion of the 2015 Regional Math and Science Festival on 24-28 November 2015 at the Baguio city National High School (BCNHS), Gov. Pack road, Baguio City

We commend your unwavering initiative to convince organizers of various events under your agency to hold such crowd drawing activities in our beloved city. Your enormous contribution to the sustained growth of our local tourism industry is laudable considering that our city is one of the preferred venues where to conduct most local, regional and national gatherings.

Your theme “Environmental Protection and Conservation of the Ecosystem” comes in a very opportune time where we need to inculcate in the minds of today’s youth the importance of sustaining efforts to preserve and protect our environment so that the present and future generations of local residents will be able to enjoy the city’s cool and romantic weather, pine-scented air and scenic tourist spots. Let us reinforce our pro-environment activities by being able to teach the youth to start valuing the environment for them to be able to pass on the benefits of preserving and protecting the environment.

Again, our warmest greetings and congratulations to one and all.

Mabuhay tayong lahat!


MAURICIO G. DOMOGAN
 City Mayor

