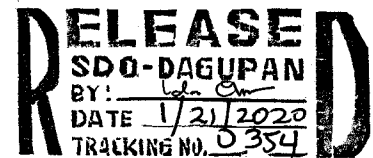




January 16, 2020

DR. MARIA CELIA J. FERNANDEZ
 Schools Division Superintendent
 Department of Education
 Division of Dagupan City
 Dagupan City, Pangasinan



Dear **Dr. Fernandez**:

Greetings in the name of service!

Our campus will be celebrating its 18th Foundation Anniversary and 2020 Science, Math, and Technology (SMT) Week from January to February 2020. With the theme *"Bringing Science and Technology to the People,"* part of the celebration is a series of activities organized especially for students and teachers.

In this regard, we would like to ask for your endorsement and invite representatives from the different schools in the Dagupan City division to join us in the following activities:

STEM WIZARDS 2020 (Provincial Eliminations) January 24, 2020 (9:00 AM-5:00 PM)			
VENUE	ELEMENTARY	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
Ilocos Sur: PSHS-IRC Ilocos Norte: Robinson's Place-Ilocos, San Nicolas La Union: Farmers' Hall-Bauang Pangasinan: Robinson's Place-Pangasinan, Calasiao	3 Grade 6 pupils + 1 coach	one (1) each from Grade 7, Grade 8, Grade 9, and Grade 10 + 1 coach	two (2) Grade 11 and one (1) Grade 12 or vice versa + 1 coach

Day 1: February 5, 2020, 1:00PM FOUNDATION ANNIVERSARY ACADEMIC AND LITERARY CONTESTS			
Title of Activity	Participants		
	LEVEL	INDIVIDUAL/TEAM	MEMBERS
STEM WIZARDS REGIONAL FINALS	Elementary, Junior High School & Senior High School <i>Top 3 winning teams during the Provincial Eliminations</i>		
Impromptu Speaking - ENGLISH	Senior High School	Individual	-
Impromptu Speaking - FILIPINO	Senior High School	Individual	-
Photoessay	Regardless of year level	Individual	-
Vocal Solo	Elementary	Individual	-
Poster and Slogan	Elementary & Junior High School	Individual	One representative per level
Science and Technology Writing- ENGLISH	Elementary, Junior High School & Senior High School	Individual	One representative per level
Science and Technology Writing- FILIPINO	Elementary, Junior High School & Senior High School	Individual	One representative per level

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Day 2: February 6, 2020, 8:00-5:00 STEM ACADEMIC AND LITERARY CONTESTS			
Title of Activity	Participants		
	LEVEL	INDIVIDUAL/ TEAM	MEMBERS
Web Development	Junior High School & Senior High School	Team	1- JHS & 1-SHS
3D Modeling in TinkerCAD	Senior High School	Individual	-
Water Rocket	Junior High School & Senior High School	Team	2- JHS & 1- SHS
Hydraulic Arm	Junior High School & Senior High School	Team	2- JHS & 1-SHS, or vice versa
Essay Writing-English	Elementary, Junior High School & Senior High School	Individual	2 representatives per level (Elem., JHS & SHS)
Essay Writing-Filipino	Elementary, Junior High School & Senior High School	Individual	2 representatives per level (Elem., JHS & SHS)
Chem Olympiad	Junior High School & Senior High School-Grade 11 only	Team	2 Grade 11 or lower (JHS)
Search for Biology Wizards	Junior High School & Senior High School-Grade 11 only	Team	2 Grade 11 or lower (JHS)
Infographics	Junior High School & Senior High School	Individual	1- JHS 1- SHS
Poster and Slogan	Elementary and Junior High School	Individual	1- Elementary 1- JHS
IP Wizard	Elementary	Team	1-3 pupils per entry *Maximum of 5 IP entries per school
Infomercial	Junior High School and Senior High School	Team	JHS: 5-6 members SHS: 5-6 members
Math Trail	Elementary	Team	3-Grade 5 pupils

The official list of participants for the **STEM Wizards 2020** shall be sent via email to mirasoljo@irc.pshs.edu.ph on or before January 23, 2020 and for the **academic and literary contests**, teacher-chaperones must pre-register using the link <https://tinyurl.com/18thIRC-Register> to declare the intended participants and their respective details. The link will be open for entries until January 31, 2020. Participants who failed to pre-register before the deadline will be disqualified from their respective competitions. Registration for the STEM Wizards and academic and literary contests is free. **Walk-in registration shall not be accommodated.**

Attached herewith are the guidelines and rules for the different contests and activities. For further inquiries, please text or call Ms. Jacquelyn O. Mirasol at 09266773882 (**for the STEM Wizards**) and Engr. John Dee A. Mangoba at 09177732932 or Ms. Winde Carle Leonen at 09667855813 (**for the academic and literary contests**).

Thank you very much as I hope this merits your attention and approval.

Sincerely yours,


RONNALEE N. ORTEZA, Ph.D.
Director III/Campus Director

Department of Science and Technology
PSHS – Ilocos Region Campus



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**GUIDELINES FOR THE SEARCH FOR STEM WIZARDS 2020
18TH FOUNDATION DAY AND 2020 SMT WEEK CELEBRATION**

Provincial Eliminations: January 24, 2020, Friday (8:30 AM)

A. VENUES:

The following are the venues of the **Provincial Elimination Round** for the STEM Wizards 2020:

Ilocos Norte – Robinson's Place- Ilocos, San Nicolas, Ilocos Norte
Ilocos Sur – PSHS-IRC, San Ildefonso, Ilocos Sur
La Union – Bauang Farmers' Hall, Bauang, La Union
Pangasinan – Robinson's Place-Pangasinan, Calasiao, Pangasinan

For the **Regional Finals**, it will be staged at gymnasium of Philippine Science High School-Ilocos Region Campus at Poblacion East, San Ildefonso, Ilocos Sur during the **18th Foundation Day And 2020 SMT Week Celebration**

B. FORMAT AND SCOPE

1. The PISAY STEM Wizards 2020 is conducted in a quiz show format where all the teams are seated and are to show their answers to the audience through an answer board all at the same time.
2. There are three divisions—Elementary, Junior High School, and Senior High School.
3. Questions in the competition come from the following topics:
ELEMENTARY: General Science (including Earth Science and Astronomy), Technology and Mathematics
JUNIOR HIGH SCHOOL: Chemistry, Biology, Physics, Earth Science, Mathematics, Agriculture, Computer Science, Engineering and Technology.
SENIOR HIGH SCHOOL: Chemistry, Biology, Physics, Mathematics, Agriculture, Computer Science, Engineering and Technology.

C. SCHEMES

1. The following point-system will be applied in the competition:

Particulars	EASY	AVERAGE	DIFFICULT
Point/s per correct answer	1	3	5
Number of Questions	10	10	10
Type of Questions	Multiple Choice	Identification, Problem Solving	
Time Limit, seconds	10	20	30

2. The use of calculators or any computing devices such as tablets or smartphones is **NOT** allowed.
3. Each team are provided with markers, answer board, scratch paper and eraser for official answers.
4. Each participating team is facilitated by a proctor from the organizers.

D. PARTICIPANTS

1. Only one team per school is allowed. The team must be composed of the following:

DIVISION	NUMBER OF MEMBERS	COMPOSITION
Elementary	3 pupils	ALL Grade 6 pupils
Junior High School	4 students	one (1) each from Grade 7, Grade 8, Grade 9, and Grade 10
Senior High School	3 students	two (2) Grade 11 and one (1) Grade 12 or vice versa

2. For verification purposes, contestants must present their current school ID upon registration. In the absence of an ID, the coach must present a certification signed by the school head or registrar indicating the students'/pupils' grade level and that they are currently enrolled.
3. Each participating school shall have one official coach only. If the school has no coach, the privilege shall be given to the principal or a school representative.

E. CONTEST PROPER

1. Each question must be answered within the time allocated for it. The contestants must stop writing and raise their markers up when the time limit expires. The time allotment is as follows:

	Easy	Average	Difficult	Clincher
Time allotment (seconds)	10	20	30	30

2. The quizmaster shall read each question twice and the time for the team to answer shall start only after the quiz master says "Go."
3. Before the time is up, the team must write his/her final answer legibly on the answer board.
4. The final answers should be boxed.
5. The proctor/facilitator will signal the quizmaster, the tabulators and the judges of the status of the answer of the team.
6. Computations or scribbles must be erased so that the final answer is clearly emphasized and is decipherable.
7. If the team wishes to change its answer, the former answer should be erased immediately and the team must write the correct answer within the allotted time.
8. After the time limit has expired, each team must raise the board before the quizmaster reads the correct answer. The proctors shall read and acknowledge whether the answer of each contestant is correct or not.
9. Late answers, unboxed answers are not considered for points and will be regarded as 'No Answer'.
10. All answers must be spelled and punctuated/marked correctly to be considered correct.

11. If the proctor cannot decipher an answer, the Board of Judges must decide on the matter.
12. If the answer has a proper noun(s), capitalization of the first letter of the word(s) is also a basis in declaring an answer correct.
13. In case of answers that may have alternate versions (e.g., The Pythagorean Theorem is the same as the Pythagora's Theorem; International System of Units is the same as SI Units or Système International d'unités), only the Board of Judges may declare the acceptability or correctness of the answer.
14. If the answer is numerical, it should follow the CORRECT significant figures rules. If the answer is a chemical formula, it should follow the IUPAC rules. If the answer is a scientific name, it should follow the CORRECT capitalizations. If the answer requires a unit, the SI units will be followed. The acceptability of alternate answers lies in the decision of the Board of Judges.

F. PROTESTS

1. The duly registered coach of the contestant is the only person authorized to file a protest.
2. Any protests should be referred to the Board of Judges before the quiz master reads the next question.
3. No protests shall be entertained by the Board of Judges after the quizmaster starts reading the next question.
4. The decision of the Board of Judges is final.

G. TIE-BREAKING

1. In case of a tie, a clincher round shall be played. It shall be a sudden death playoff between or among the contestants (team) with equal scores until a winner emerges.
2. The easy items shall be in multiple-choice type while the average, difficult, and clincher shall be in either identification or problem solving type.

H. AWARDS

1. The team with the highest score shall be declared the First Place winner; the second highest, Second Place; and the third highest, the Third Place winner.
2. The top 3 winning teams will be participating in the Regional Finals on February 5, 2020 to be held at the Phil. Science High School-Ilocos Region Campus Gymnasium.
3. Winners of the competition will be awarded with cash, medals, trophies, and certificates.
4. Any violation of the rules shall cause the disqualification of the team concerned.

I. PRE-REGISTRATION

DEADLINE: January 23, 2020

Please contact **Ms. Jacquelyn O. Mirasol**, Outreach Committee Coordinator, at **09266773882**.

On-site registration MAY be entertained depending on the availability of slots.

**** This is the end of the guidelines****



18TH FOUNDATION DAY CELEBRATION
LITERARY CONTESTS GUIDELINES
DAY 1: February 5, 2020

Theme: PSHS-IRC Bringing S and T to the People

GENERAL REGISTRATION

Teacher-chaperones must pre-register using the link <https://tinyurl.com/18thIRC-Register> to declare the intended participants and their respective details. The link will be open for entries until January 31, 2020. Participants who failed to pre-register before the deadline will be disqualified from their respective competitions.

IMPROMPTU SPEAKING

Venue: English- Ruby; Filipino- Graviton

I. Participants

1. Each participating school shall be eligible to field one contestant per category (English and Filipino) for Senior High School Level.

II. Regulations

1. The order of performance shall be determined by drawing lots before the contest proper.
2. Each contestant shall be given only **five (5) minutes to prepare and another five (5) minutes to deliver it.**
3. The contestant must be in **business/formal attire** when delivering his or her speech. The **use of school uniform is prohibited.**
4. The speech must be original, and shall be delivered in English (for English category) or Filipino (for Filipino category).
5. The contestant must be aware of the time during his/her delivery. If delivery exceeds the allotted time, three percent (3%) shall be deducted from the total score. Moreover, the contestant shall be allowed a **maximum of thirty (30) seconds extension**, after which, he/she will be forced to stop. Flashcards shall be raised to remind the contestants of the remaining time.
6. Default time is 15 minutes after the official start of the contest.

III. Criteria

Content: appropriateness of answer to question, elaboration, and clarity of idea	45 %
Delivery: confidence and conviction	35 %
Originality: freshness and introduction of new and unexplored ideas	20 %

IV. Awards

1. The final ranking shall be based on the average rank garnered by the contestants.
2. In case of ties, the decision shall be based on the first criterion (Content). If it fails to break the tie, the next criterion shall be used, and so on until no more ties exists. If the tie still exists after using all the criteria, another topic shall be given. The above rules shall be used.
3. The top three winners shall be declared as winners of the event.

PHOTOESSAY

Venue: JHS - Emerald

I. Participants

1. Only one (1) representative per school is allowed for each category, regardless of year level.

II. Regulations

1. The participant is not allowed to confer with his/her coach throughout the entirety of the competition.
2. The camera (DSLR/Mirrorless) should have a Manual mode. Post-processing is not allowed. Cameras will be checked before the start of the competition.

III. Contest Proper

1. The participant will be given 1 hour to go around the designated area to take pictures. The theme of the Photo Essay will be given before the working time.
2. Only five (5) photographs will be chosen by the student to create a photo series (*set of images that are presented together on the same theme, edited in the same style, with the images linking*). The participant will be given another hour for the lay-outing using their own laptop. The participant is required to put a title and short description of their photo series.

IV. Awards

1. The top three (3) scorers will be declared winners.
2. Winners shall receive medals and certification of recognition.

VOCAL SOLO
Venue: Grounds

I. Description

This competition is to showcase the vocal skills and talents of the students in expressing science, technology, engineering and mathematics.

II. Participants

1. The competition is open to all Elementary schools.
2. Each school shall only send one (1) contestant.

III. Contest Proper

1. The piece shall be one straight song about environmental awareness, earth protection, love of nature, saving Mother Earth, advocacies to change the world, a call to unite and the like, in English or Filipino. Music adaptation is prohibited and cause for disqualification.
2. Singing shall be accompanied by a minus one (in mp3 format). Multiplex is not allowed. CDs/Flash drives must be tried out prior to the contest and a tested back-up copy should also be presented and kept on hand.
3. Delivery of the piece shall be within three to seven (3-7) minutes only.
4. The decision of the judges is final.

IV. Criteria

CRITERIA	%
Tone quality (Vocal Technique/Intonation)	40
Musicianship (Dynamic nuances, Interpretation, Phrasing, Diction)	40
Department	20

V. Awards

1. All performances shall be judged by a Board of Judges composed of experts in the field of music.
2. In the case of lone participation, the contestant must have a rating of at least 85% to be declared as a winner.
3. The three (3) contestants with the highest averaged scores will be declared as winners in order of score; CHAMPION, First Runner-Up, and Second Runner-Up.
4. Winners will receive medals and certificates.

POSTER AND SLOGAN
Venue: Library

I. Descriptions

This contest aims to involve artistically-inclined young artists in promoting science, technology, engineering and mathematics.

II. Participants

1. For the student category, each participating school shall send only one (1) representative per category; one (1) category for grade school and one (1) for junior high school.
2. The school shall fill in the REGISTRATION form with complete details of the participants and send it thru leonenmp@irc.pshs.edu.ph on or before January 31, 2019.

III. Regulations

1. Each participant must bring their own materials: ruler, pencil, eraser, marker, crayons or any coloring materials, and white cartolina.
2. All entries must be started and completed on-the-spot within the allotted time of two (2) hours.
3. All entries shall be pre-numbered by the facilitators and no other identifying marks are allowed to appear in the artworks.

IV. Criteria

CRITERIA	WEIGHT, %
Relevance to the theme	40
Creativity and presentation	40
Originality	20

V. Awards

1. The top three scorers will be declared as CHAMPION, First runner-up, and Second runner-up, respectively.
2. Winners will receive medals and certificates.

SCIENCE AND TECHNOLOGY WRITING

Venue: *English and Filipino- Emerald
Elementary, JHS and SHS*

I. Description

This contest aims to involve young writers in promoting science, technology, engineering and mathematics.

II. Participants

1. Only one representative each from Elementary, Junior High and Senior High levels for the English and Filipino categories shall be allowed per school.

III. Regulations

1. Each contestant shall be assigned a number as their identifier for the contest.
2. The essay should display both originality and effective writing; thus, the contestants are not allowed to bring an outline for their essays.
3. Each contestant shall be given sixty (60) minutes to compose and write their pieces. Only one submission per contestant will be accepted.
4. The contestant should provide a title for the essay. (The topic or theme will be given by the facilitator at the contest proper, but it cannot be considered as the title.)
5. The essay must contain no more than 1000 words. Five percent (5%) of the total score shall be deducted if the piece exceeds the word limit.
6. Materials for the competition shall be provided by PSHS-IRC. The reverse sheet of the paper provided may not be used.

IV. Criteria

Entries will be judged according to the following criteria:

- | | |
|--|-----|
| a. Content and Adherence to Topic | 40% |
| b. Unity, Coherence and Organization | 25% |
| c. Originality and Creativity | 20% |
| d. Grammar, Language and Writing Style | 15% |

V. Awards

- 1) There will be three (3) winners in each category for English and Filipino which will be awarded as first, second and third, respectively.
- 2) A contestant who arrives fifteen (15) minutes after the official start of the contest shall be disqualified by default.

17TH STEM WEEK CELEBRATION
ACADEMIC AND LITERARY CONTESTS GUIDELINES
DAY 2: February 6, 2020

WEB DEVELOPMENT

Venue: JHS & SHS- Computer Laboratory

I. Description

This contest is part of the Science, Technology, Engineering and Mathematics (STEM) Celebration of Philippine Science High School. Its purpose is to involve young programmers and promote science, mathematics and technology. The contestants will create a website promoting the Philippine Science High School-Ilocos Region Campus as a pioneer in science, mathematics and technology education.

II. Participants

Each school is represented by one (1) from any grade level from 7-10 for the junior high school category and one (1) from any grade level from 11-12 or the senior high school category.

III. Regulations

A. General Specifications

1. The website shall consist of at least five (5) pages. It shall include the following major links (contestants can layout the links in a way that will enable the site to be more appealing and user-friendly).
 - Home
 - Vision
 - Mission
 - About Us
 - Contact Us
2. All necessary information and images for the contest will be provided by Philippine Science High School. (Contestants can use any image editing software to enhance or edit the images)
3. Contestants will use the computers and software applications such as Notepad++ and web browsers needed for the contest provided by Philippine Science High School.

B. Additional Technical Features

1. Use a valid HTML 5 document for content. Using web standards will ensure that all browsers will display your website properly, without time-consuming rewrites.
2. Use Cascading Style Sheets (CSS/CSS3) for the layout and design of the website.
3. The Home page must contain an image slider. The slider must consist of at least (5) images.
4. The website must be user-friendly. Make sure it is compatible with different browsers such as Mozilla Firefox, Google Chrome, and Internet Explorer.
5. The website must have a responsive web design. It must be compatible with any screen size and mobile platform.
6. Contestants will only use Notepad++ to write their codes. Any other software will not be considered.

C. General Rules

1. Use of internet for the duration of the contest proper is strictly prohibited.
2. Coaches are not allowed within the contest area.
3. No bags, cellular phones, notepads, or books are allowed within the contest area. Personal belongings of the contestants shall be given to their coaches/companions for safekeeping.
4. Contestants caught cheating or engaging in any form of dishonesty shall be automatically disqualified.
5. In case of power interruption, file corruption and/or system crashes, the contestant's time will be paused to retrieve their last saved file. Failure to save their progress prior to the interruption will not subject to reset their timer. **ALWAYS SAVE YOUR PROGRESS.**
 - a. If a technical problem occurs, the contestant should immediately ask for assistance from the contest facilitators for a prompt response so their time could be temporarily put on hold to be fair to the other contestants.
6. All websites must be done on the spot and completed within the allotted time of one (1) hour.

IV. Criteria

CRITERIA	WEIGHT, %	PARTICULARS
Structure and Organization	20	Website framework, navigation
Content	10	Organization of information
Visual Design	30	Layout style, color combination, effective use of images, effective use of fonts
Functionality	10	use of technology on the site, quick loading site, works with different browsers
Over-all Experience	10	User-friendliness, interactive experience

V. Awards

1. All entries shall be judged by a Board of Judges composed of experts in the fields of SMT and Computer programming.
2. The three (3) groups with the highest averaged scores will be declared as winners in order of score; CHAMPION, First Runner-Up, and Second Runner-Up.
3. Winners will receive medals and certificates.

3D Modeling in TinkerCAD

Venue: SHS- Fabrication Laboratory H106-107

I. Description

This contest is part of the Science, Technology, Engineering and Mathematics (STEM) Celebration of Philippine Science High School. Its purpose is to involve young designers and engineers in using their skills and knowledge in modeling through computer-aided design (CAD). The contestants will use the web-based version of TinkerCAD to create a model of a sculpture that displays emphasis on the mission of PSHS to promote and bring STEM education to the people of the Philippines.

II. Participants

Each school is represented by one (1) from any grade level from 11-12 for the senior high school category.

III. Regulations

A. General Specifications

1. The model shall be composed of at least 15 components that comprise the assembly of the sculpture. One (1) component is defined by one main feature that is grouped into the assembly.
2. The model shall be within the minimum size of 100mmx100mmx100mm to a maximum size of 150mmx200mmx200mm in terms of length, width and height respectively.
3. Contestants will bring and use their own laptops with an installed web. The contestants are expected to also bring their own source of data in the form of pocket wifi, portable modem or mobile data.

B. Additional Technical Features

1. Make sure to install any of the following browsers: Mozilla Firefox, Google Chrome, and Internet Explorer. Only these three will be allowed to be used in the contest proper.
2. The contestants are expected to have a registered account in <https://www.tinkercad.com/> using their Autodesk or Google accounts.
3. Outputs shall be exported to .stl file format and submitted to the facilitator.

C. General Rules

1. Use of internet for the duration of the contest proper shall be strictly limited to the tab for TinkerCAD.
2. Coaches are not allowed within the contest area.
3. No bags, cellular phones, notepads, or books are allowed within the contest area. Personal belongings of the contestants shall be given to their coaches/companions for safekeeping.
4. Contestants caught cheating or engaging in any form of dishonesty shall be automatically disqualified.
5. In case of power interruption, file corruption and/or system crashes, the contestant's time will be paused to retrieve their last saved file. Failure to save their progress prior to the interruption will not subject to reset their timer. ALWAYS SAVE YOUR PROGRESS.

- a. If a technical problem occurs, the contestant should immediately ask for assistance from the contest facilitators for a prompt response so their time could be temporarily put on hold to be fair to the other contestants.
6. All models must be done on the spot and completed within the allotted time of one (1) hour.
7. A 2-minute presentation will be allotted for each model and contestant after the modelling phase.

IV. Criteria

CRITERIA	WEIGHT, %	PARTICULARS
Integrity to Specifications	30	Within allowable dimensions At least 15 components
Relevance to Theme	20	Emphasis on the mission of PSHS to promote and bring STEM education to the people of the Philippines
Visual Design	30	Effective combination of forms and grouping of components
Presentation	10	Well-explained presentation of the design considerations
Over-all Impact	10	Overall presentability of the sculpture

V. Awards

1. All entries shall be judged by a Board of Judges composed of experts in the fields of Arts, Engineering and Technology.
2. The three (3) winners will receive medals and certificates.

WATER ROCKET *Venue: IRC Plaza*

I. Description

Water rocket is a rocket model where its function is fueled by the Newton's third law of motion. This uses pressurized gas to force out the water which propels the launching of the model rocket.

II. Participants

1. Each school can only have one (1) team composed of three (3) high school students (2 junior and 1 senior high level)
2. Participants must be bona fide high school students of the school they are representing.
3. The school shall fill out the REGISTRATION form with complete details of the participants and send it thru leonenmp@irc.pshs.edu.ph on or before January 31, 2019.

III. Regulations

1. The rocket should consist a 2-L plastic soda bottle and a launcher built by the participating teams prior to the competition.
2. Rockets considered unsafe to launch by the judges will be disqualified.

IV. Contest Proper

1. During the competition, the rockets will be judged in terms of the farthest distance traveled and longest time of flight in air.
2. Each team will select the desired launch angle. The facilitators will determine the amount of pressure to be applied to the rockets.
3. Each rocket is officially launched twice (for the farthest distance traveled and for the longest time of flight).
4. The distance from the launcher to the landing point of the rocket and the time of flight will be measured by the judges.
5. Results will be ranked for each trial.
6. The winners will be determined by the final combined ranking of each team.

V. Awards

1. Top three (3) winners will receive medals and certificates.

HYDRAULIC ARM

Venue: Camachile near Food Laboratory

I. Description

Hydraulic arm projects are prototypes of human arms. It can execute specific tasks such as picking and lifting objects. There are different ways on how one can build such prototype. Hydraulic arm can be an introduction for students to robotics while incorporating physics concepts, such as Pascal's principle. This contest aims to:

- a) design and build a prototype hydraulic arm applying Pascal's principle
- b) develop teamwork and stimulate creativity among students
- c) develop critical thinking in designing a plan and executing it

II. Participants

1. Each school can only have one (1) team composed of at most three (3) high school students, a mix of junior and senior high level.
2. Participants must be bona fide high school students of the school they are representing.

III. Regulations

1. The participants are free to choose the materials for their hydraulic arm. This is to stimulate their creativity and enthusiasm in constructing their prototype.
2. The hydraulic arm must be able to perform the following functions:
 - a) lift objects
 - b) body rotation of 360°
 - c) grip objects
 - d) extend arms at least 12 inches from its center
3. Each team must choose only one (1) member who will control the hydraulic arm on the contest proper.

IV. Contest Proper

1. Each group will present their hydraulic arm prototypes to the judges.
2. The challenge or tasks for the hydraulic arms will be disclosed to the participants on the day of the contest wherein the functions of the arm, as stated in item 2 under the regulations, will altogether be judged.
3. Three (3) trials will be executed by the prototypes. Perfect execution of the tasks will merit corresponding points.

V. Awards

1. Top three (3) winners will be declared: CHAMPION, First Runner-up, Second Runner-up
2. Winners will receive plaque, medals, certificates and cash prize.

ESSAY WRITING

Venue: English- Ruby / Filipino-Dahlia

I. Descriptions

Its purpose is to involve the young writers and promote science, technology, engineering and mathematics.

II. Participants

Only two (2) representatives shall be allowed per category (Elementary, Junior High School and Senior High School) per school.

III. Regulations

1. Each contestant shall be assigned a number as their identity.
2. The essay should display both originality and effective writing. The contestants are not allowed to bring an outline for their essays.
3. Each contestant shall be given 60 minutes to compose and write their pieces. Only one submission per contestant will be accepted.
4. The contestant should provide a title for the essay. (The topic or theme will be given by the facilitator at the contest proper, but it should not be considered as the title.)
5. The essay must contain no more than 1000 words. Five percent (5%) of the total score shall be deducted if the piece exceeds the word limit.
6. Materials for the competition shall be provided by PSHS-IRC. The reverse sheet of the paper provided shall not be used.

IV. Criteria

Entries will be judged according to the following criteria:

a) Content and Adherence to Topic	40%
b) Unity, Coherence and Organization	25%
c) Originality and Creativity	20%
d) Grammar, Language and Writing Style	15%

V. Awards

1. There will be three (3) winners in each category for English and Filipino which will be awarded as first, second and third, respectively.
2. A contestant who arrives fifteen (15) minutes after the official start of the contest shall be disqualified by default.

CHEMISTRY OLYMPIAD & SEARCH FOR BIOLOGY WIZARDS

Venue: JHS - Delta

I. Background

The competition is part of the Science, Mathematics, and Technology (SMT) Week Celebration. This is to showcase the knowledge of high school student in the different fields of chemistry. The competition will only include a pen and paper examination. Laboratory skills competition will not be included.

II. Participants

1. The event is an individual competition.
2. Each participating school may send a maximum of two participants for each competition (Chemistry Olympiad and Biology Wizards)
3. To qualify, the participant must be in Grade 11 or lower at the time of the contest.

III. Regulations

1. The use of non-programmable calculator is allowed. Use of cellular phones or access to the internet during the contest is prohibited and can be a ground for disqualification.
2. Sharing of pen, pencil, eraser, etc. between participants is not allowed. All questions must be addressed to the proctor only.
3. Participants must wear their school ID's during the contest.

IV. Contest Proper

1. The participants will be seated in a classroom and will be given a copy of the 50 item- questionnaire.
2. Proctors will explain the rules as stated in the questionnaire.
3. The participants will be given 1.5 hours to answer the questions in the questionnaire provided.
4. Participants may not leave the room before they submit their answer sheets. This includes use of the toilet. Once submitted, answer sheets may not be taken back by the participants.

5. All rights are reserved to the Board of Judges to disqualify participating teams who will commit any violation in the contest rules and regulations, and in any matter not stated thereto. All powers are reserved to the Committee- in-Charge for any decision making not stated herein.
6. The questions will focus on the different fields of Chemistry and Biology, respectively.

V. Awards

The top three (3) scorers per competition will receive Medals of Honors, Certificates of Commendation, and Cash Prizes.

INFOGRAPHICS

Venue: JHS & SHS- Computer Science Laboratory

I. Background

Infographics in science education are a highly underestimated tool, one that many more teachers and learners are discovering to be effective and fast in grasping difficult concepts. In this competition students will have the task make an infographic on a specific topic from the theme "Science and Technology for a Sustainable Future".

II. Participants

1. A school may send one (1) participant for each division, Junior High School and Senior High School.

III. Contest Proper

1. The materials like computers, software, and internet connection to be used in this competition will be provided by PSHS-IRC.
2. The contestant will be given two (2) hours to finish the infographic.

IV. Criteria for judging

CRITERIA	WEIGHT, %	PARTICULARS
Design	25	Layout, color scheme, fonts
Content	30	Terms, facts, quantity and quality of data
Clarity	25	Claim, efficiency, impression
Representation	20	Design complementing the content, careful choice of visuals,

V. Awards

1. The top three scorers will be declared as CHAMPION, First Runner-Up, and Second Runner-Up.
2. In the case of lone participation, the contestant must have a rating of at least 85% to be declared as a winner.
3. Winners will receive medals and certificates.

POSTER/SLOGAN MAKING

Venue: Elementary & JHS- Library

I. Description

This poster slogan making contest aims to involve artistically-inclined young artists in promoting science, mathematics and technology through the theme "Science and Technology for a Sustainable Future".

II. Participants

1. For the student category, each participating school shall send only one (1) representative per category; one (1) category for elementary and one (1) for junior high school.

III. Contest Proper

1. Each participant must bring their own materials: ruler, pencil, eraser, marker, crayons or any coloring materials and cartolina.
2. All entries must be done on-the-spot and must be completed within the allotted time of two (2) hours.
3. All entries shall be pre-numbered by the facilitators and no other identifying marks are allowed to appear in the artworks.

IV. Criteria

CRITERIA	WEIGHT, %
Relevance to the theme	40
Creativity and presentation	40
Originality	20

V. Awards

1. The top three scorers will be declared as winners.
2. Winners will receive medals and certificates

IP WIZARDS

Venue: Elementary- Electron

I. Background

This contest is part of the Science, Mathematics and Technology (SMT) Celebration of Philippine Science High School- Ilocos Region Campus. This will be a platform for Elementary students to share their investigatory projects in the different fields of sciences. The competition is divided into two categories namely: Natural Science and Applied Science. Natural Science will include projects under agricultural science, animal science, plant science, behavioral and cognitive science, biochemistry, biology, medicine and health science, material science, environmental science, and chemistry. Applied Science are projects under, physics, mechanical engineering, materials engineering, biological engineering, chemical engineering, civil engineering, electrical and electronics engineering, energy and transportation, and computer science.

II. Participants

1. Each school can send a maximum of five (5) IP entries.
2. Each entry must be an original work of one to three bonafide students of the school they are representing.
3. Participants are required to submit an abstract of their project (follow guidelines in IP WIZARDS_ENTRY FORM A.docx).
4. All entries for each school will automatically proceed to the exhibit and project presentation.
5. There is NO registration fee for this competition.

III. Registration

1. Each participating school must send an extended abstract of the project by filling up the attached entry form found in the link <https://bit.ly/38PDxyf>
2. All entries of the participating school must itemize their entries in the entry form B.
3. Entry forms must filled in the link
4. Upon registration of the entries, the school will be notified and a booth number will be assigned.

IV. Contest Proper

1. Presenters are required to be in their school uniforms during the presentation.
2. Respective booth must be set-up an hour before the exhibit and judging proper. Additional presentation paraphernalia (i.e poster, brochure, prototype, products) must be brought by the school. Only one (1) panel board and one (1) table are provided by the host school.
3. Presenters must be at their booth at all times during the duration of the exhibit. Roaming around is NOT allowed.
4. The exhibit will be a half day event while the judging session will be anytime during the exhibition.
5. Judges will have the prerogative for the time and duration of the evaluation.

V. Criteria for Judging*

Exhibit and Project Presentation

Component	Sub-component	Percentage (%)
Project exhibition (25%)	Relate to knowledge in science/mathematics principles	10
	Display or demonstrate of products or prototypes. Application of audio-visual tools, such as computer, and technical and graphic.	10
	Authenticity, creativity, and innovation	05
Report Presentation (25%)	Individual/team presentation skills	10
	Creativity and scientific skills	05
	Communication skills	05
	Overall personality	05

Report Writing (25%)	Abstract	05
	Introduction	05
	Methodology	05
	Results, outcomes and discussion	05
	Conclusion and suggestion	05
Project Significance (25%)	Scientific thoughts/ engineering purpose	10
	Elements of sustainable development	05
	Contribution to the practice and society development	05
	Effects to quality of nature and society	05

VI. Awards

1. The top five (5) scorers will be declared winners.
2. Prizes, certificates and medals will be given to the winners while certificate of participation will be given to the participants.

**Adapted from Malaysian International Young Inventors Olympiad 2019*

INFOMERCIAL

Venue: JHS & SHS- Cesium

I. Background

Infomercials serve as a short-cut tool to entice learning hard concepts in science for its uses multimedia platforms such as videos, animations, and sometimes augmented reality in presenting lessons. In this competition students will have the task make an infomercial on a specific topic from the theme "Science and Technology for a Sustainable Future".

II. Participants

A school may send one (1) team, consisting of 5-6 students and their coach, for each category: Junior High School and Senior High School.

III. Contest Proper

1. The materials like computers, video editing software, video camera, and smartphones must be brought by the participants.
2. The team will be given four (4) hours to conceptualize, shoot, and edit their 2-3 minute infomercial. The video location will be inside the PSHS-IRC campus.

IV. Criteria for judging

CRITERIA	WEIGHT, %	PARTICULARS
Video Quality	30	Editing, transitions, resolution, sound
Content	40	Terms, facts, quantity and quality of data
Clarity	25	Claim, efficiency
Representation	15	WOW factor

V. Awards

1. The top three scorers will be declared as CHAMPION, First Runner-Up, and Second Runner-Up.
2. In the case of lone participation, the contestant must have a rating of at least 85% to be declared as a winner.
3. Winners will receive medals, and certificates.