



# DEP-ED SDO N.E

### Department of Education

REGION III - CENTRAL LUZON SCHOOLS DIVISION OFFICE OF NUEVA ECIPECORDS SECTION

05 June 2023

DIVISION\_MEMORANDUM No. 16 , s. 2023

#### DIVISION WRITESHOP ON THE INTEGRATION OF ROBOTICS IN STEM EDUCATION

Assistant Schools Division Superintendents Division Chiefs, CID and SGOD Public Schools District Supervisors School Heads Science Department Head STE and STEM Teachers All Others concerned

- 1. Relative to the development of 21st century skills of our learners and the application of Futures Thinking and Design Thinking in the delivery of Science instruction, the Schools Division of Nueva Ecija shall conduct a Division Writeshop on the Integration of Robotics in STEM Education on June 10, 2023. June 17, 2023 and July 1, 2023 at PAGCOR Building, Sta. Rosa Nueva Ecija at 8::00AM - 5:00PM.
- 2. This activity aims to:
  - 2.1 integrate robotics in managing and supporting STEM education;
  - 2.2 equip teachers and learners with the necessary concepts of robotics as an emerging technology;
  - 2.3 acquire basic methods and pedagogies in teaching robotics to STE/STEM students:
  - 2.4 design simple machines by applying the basic concepts and principles in robotics and programming; and
  - 2.5 capacitate teachers and learners with the skills needed in navigating hardware and software applications in robotics.
- 3. The participants in this activity are the select Grade 10 STE and Grade 11/12 STEM Science teachers who are teaching Electronics and Specialized Subjects in STEM. They are advised to bring Arduino set/kit to be utilized during the activity.
- 4. Enclosed is the list of participants and training matrix.

Enclosure No. 1 List of Participants

Enclosure No. 2 Training Matrix

- 5. This division memorandum serves as the Authority to Travel of the participants and for reference purposes.
- 6. As stipulated in DepEd Order No.53 s. 2003 teacher -participants who render services during the conduct of this activity which may fall during summer vacation or during weekends or during holidays are entitled to service credits equivalent to eight (8) hours of service pay. On the other, the non-teaching personnel as members of planning/technical committees, training team and Project Management Team shall earn Compensatory Time Off (CTO) in lieu of June 10. June 17 and July 1, 2023.



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7. Immediate and wide dissemination of the Memorandum is earnestly desired.

Engr. EDGARD C. DOMINGO, PhD, CESO V
Schools Division Superintendent

Encl.: As stated
To be included in the perpetual index under the following subjects:
LEARNING RESOURCE INTERVENTION
TEACHERS
ROBOTICS

DM 2023: Division Writeshop on the Integration of Robotics in Stem Education 2-2/RZB-05/22/2023

#### DIVISION WRITESHOP ON THE INTEGRATION OF ROBOTICS IN STEM EDUCATION

Venue: PAGCOR Building, Santa Rosa Nueva Ecija

Inclusive Dates: June 10, 2023, June 17, 2023 and July 1, 2023

#### I .List of Participants

STE Implementing Schools	Name of Participants	STEM Implementing Schools	Name of Participants
1.Bongabon NHS	Donato B. Gonzales	Bongabon SHS	Concordia I. Villasis
2.Talavera NHS	Jenny Rose L. Andres	Talavera SHS	Grade 11/12 STEM
			teacher
3.Cabiao NHS	Nelilyn B. Glodo	Cabiao SHS	Rachelle Ann G.
			Gonzales
4.NEHS	Mark Angelo A. de	NEHS SHS	Evangeline D.
	Jesus		Gonzales
5.Aliaga NHS	John Rusty T. Pereña	Aliaga SHS	Jomar S. Flores
6.Bartolome	Jerwin Domingo	Bartolome Sangalang	Ryann Christoper G.
Sangalang NHS		NHS	Hermoso
7.Dr. Ramon De Santos NHS	Divine S. Daria	Dr. Ramon De Santos NHS	Amor C. Dela Cruz
8.GVAHS	Clarissa Piguero	GVAHS	Engr. Marvin C.
			Lomanog
9.Jorge M. Padilla	Cherry Ann B.	Jorge M. Padilla NHS	Nestor C. Mateo
NHS	Lagasca		
10.ELJMHS Quezon	Rowell Reinier J.	ELJMHS Quezon	Harvey V. Valdez
	Gonzales		
11.Exequiel R. Lina	Noel Vincent L.	Exequiel R. Lina NHS	Jennifer C. Valdez
NHS	Domingo		
12.Gen. Tinio NHS	Krypton Redgie B.	Gen. Tinio NHS	Grade 11/12 STEM
	Dela Cruz		teacher
13.Gen. Mamerto	Ruel S. Bermudez	Gen. Mamerto NHS	Marvin O.
NHS			Veneracion
14,Pantabangan NHS	Rizel Uraga	Pantabangan NHS - SHS	Marco Polo Munar
15.Dona Juana	Patricio M. Flores, Jr.	Dona Juana Chioco	Benedick Celso B.
Chioco NHS		NHS	Tenorio
16.Carranglan NHS	Imelda R. Teodoro	Carranglan NHS	Napoleon C. Toquero
17.Palayan City NHS	Marvin Villanueva	Palayan City NHS- SHS	Edwin S. Reyes
18.Rizal NHS	Arthur Allen B. Baldevarona	Rizal NHS-SHS	Roda Araña
19.Julia Ortiz NHS	Mark Kevin T. Abraham	Julia Ortiz NHS- SHS	Grade 11/12 STEM teacher
20.Sto. Domingo	Cristoper T. Carillo	Sto. Domingo Trade	Danjun P. Mariano
Trade NHS	<u> </u>	NHS	
21.San Ricardo NHS	Grade 10 STE	San Ricardo NHS-	Jean Benidette S.
	teacher	SHS	Dela Cruz

22.Talugtug NHS	Arvey E. Datuin	Talugtug NHS-SHS	Leomar C. Angel
23.Zaragosa NHS	Jessie E. Hernandez	Zaragosa NHS-SHS	Aljohn M. de Leon
24.Penaranda NHS	Michael R. Jacob	Penarada NHS-SHS	Julius R. Manzar
25.Nampicuan NHS	Jenny L. Duenas	Nampicuan NHS	Marisol S. Arange
26.Santa Rosa NHS	Jennifer R. Corpuz	Santa Rosa NHS	Levie G. Cancer
27.San Mariano NHS	Joselito J. Mangulabnan	San Mariano NHS	Maria Rodessa G Boguiren
28.Putlod-San Jose NHS	Geraldine P. Gobrin	Putlod-San Jose NHS	Edisen F. Mamau
29. LLanera NHS	Kevin G. Corpuz	Llanera Senior HS	Fatima M. Zoilo
30. Tagumpay NHS	Grade 10 STE teacher	Tagumpay Senior H	Grade 11/12 STE teacher

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## DIVISION WRITESHOP ON THE INTEGRATION OF ROBOTICS IN STEM EDUCATION

Venue: PAGCOR Building, Santa Rosa Nueva Ecija

Inclusive Dates: June 10, 2023, June 17, 2023 and July 1, 2023

#### **II.Training Matrix**

Planning Committee:

Chairman: Rosemarie Z. Burayag

EPS, Science

Co-Chair: Honeylette Natividad

HT III, Gen. Natividad NHS

**Technical Committee:** 

Chairman: Jayson M. Lazaro

MT II, Bartolome Sanggalang NHS Co-Chair : Clerilyn T. Badua

OIC-Head Teacher. Zaragosa NHS

Date	Time	Topics/Activities	Resource Speakers/ Facilitators
June 10, 2023 First Day	8:00AM	Registration of the Participants	Honeylette Natividad HT III, Science Gen. Natividad NHS
	8:20AM - 9:00AM	Pre-Test	Jayson M. Lazaro
	9:00AM - 9:30AM	Opening Program	MT II, Bartolome Sanggalang NHS
	9:30AM - 9:50AM	Health Break	
	9:50AM-12:00PM	Walkthrough on Learning Competency in Electronics and Research	Clarissa Mariano Head Teacher VI Talavera NHS
	12:00PM - 1:00PM	Lunch Break	
	1:OOPM -3:30PM	Development of Learning Activity Sheets in Electronics and Research with the Integration of Robotics	Katherine Joy P. Buan Teacher III, Cabiao NHS
	3;00PM- 3:15PM	Health Break	
	3:15PM- 4:30PM	Capstone Project with the Application of Robotics - Team SENOPTICA	<b>Darius Sampaga</b> MT II- Science Talavera NHS
	4:30PM - 5:00PM	Program Evaluation for Day 1	Dr. Jet Lee C. Ocampo SEPS, M and E
June 17, 2023 Second Day	8:00AM - 8:30AM	Management of Learning	Participants from CDI and CD II
	8:30 AM - 12:00AM	Basic Parts of a Robot and other Applications	Hilario F. Matias Jr. Rigel Education Solutions
	12:00PM - 1:00PM	Lunch Break	
	1:00Pm - 4:00PM	Designing of Robotics Activities in Grade 10 Electronics and Research	Hilario F. Matias Jr. Rigel Education Solutions

4:00PM - 4:30PM **Assigning Participants** Rosemarie Z. Burayag on the Integration of EPS, Science Robotics Activities in Lesson Planning 4:30PM - 5:00PM Program Evaluation for Dr. Jet Lee C. Ocampo Day 2 SEPS, M and E July 1, 2023 8:00AM - 8:30AM Management of learning Participants from CDIII Third Day and CD IV 8;30AM - 10:00AM Demonstration Teaching 10:00AM -10:30 AM Provision of TA -Members of the TWG Critiquing the output Mark Aaron Legaspi Teacher III Bongabon NHS 10:30AM - 12:00PM Demonstration Teaching 12:00PM - 1:00PM Lunch Break Provision of TA -Members of the TWG 1:00PM - 1:30PM Critiquing the output Mark Aaron Legaspi Teacher III **Bongabon NHS** 1:30PM - 2:00PM Post Test 2:00PM - 3:00PM CLOSING PROGRAM 3:00PM - 3:30PM Program Evaluation for Dr. Jet Lee C. Ocampo Day 2 SEPS, M and E

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