



Republic of the Philippines
Department of Education
REGION III – CENTRAL LUZON
SCHOOLS DIVISION OF SCIENCE CITY OF MUÑOZ

17 November 2023

SCHOOLS DIVISION MEMORANDUM

No. 426,

s. 2023

**TECHNOLOGY-BASED AND HANDS-ON INSTRUCTION FOR
SCIENCE AND MATHEMATICS**

To: Assistant Schools Division Superintendent
Chief Education Supervisors
Public Secondary Schoolheads
All Others Concerned

1. The SDO-Science City of Munoz thru the Curriculum Implementation Division will conduct a training-workshop entitled Technology-Based and Hands-On Instruction for Secondary Science and Mathematics Teachers on November 24-25,2023, December 12-13, and 15, 2023, at SDO Conference Hall (Science) and Multi-Purpose Hall-LGU (Mathematics), Science City of Munoz from 8:00 a.m. to 5:00 p.m.
2. The program aims to:
 - a. enhance and innovate the Science and Mathematics teaching and learning process inside the classroom;
 - b. exhibit a positive disposition towards the teaching and learning of Science and Mathematics through the appropriate use of technology and manipulatives such as scientific and graphing calculators, digital microscopes, and manipulatives; and
 - c. provide teachers and learners with relevant technology and manipulative learning resources.
3. Service credits for teaching personnel and Compensatory Overtime (COC) for non-teaching personnel will be granted in lieu of the activity that will fall on holiday and weekend per DO No. 53, s. 2003, titled *Updated Guidelines on Grant of Vacation Service Credits to Teachers*, and Civil Service Commission-Department of Budget and Management Joint Circular No. 2, s. 2015, re: *Policies and Guidelines on Overtime Services and Overtime Pay for Government Employees*, respectively.
4. Each school is advised to bring two geoboards and a box of assorted rubber bands.



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5. For the information and guidance of all concerned, enclosed are the following:
 - a. Matrix of Activities, and
 - b. List of Participants
 - c. Program Management Team and Technical Working Group.
5. For queries, please communicate with Dr. Nelie D. Sacman, CID-EPS, through her messenger or cellphone number 09178729345.
6. Wide dissemination of this Memorandum is earnestly desired.




JOHANNA N. GERVACIO PhD, CESO V
Schools Division Superintendent

Encl: As stated
Reference: None
To be indicated in the Perpetual Index
Under the following subjects:

RM 466 S.2022 Technical Assistance on Laboratory Management

CID/NDS / capbuild
002/ November 17, 2023



Address: Brgy. Rizal, Science City of Muñoz, 3119
Telephone No.: (044) 806 -2192;

Email Address:

munoz@deped.gov.ph



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Enclosure No. 1 to Schools Division Memorandum No. 426, s. 2023

Time	Topic/Activity	Resource Speaker/In-charge
Day 1(December 8, 2023)		
8:00 – 8:30 a.m.	Registration	TWG
8:30 – 9:00 a.m.	Opening Program	TWG
9:00 – 10:15 a.m.	Plenary 1: The TPACK Framework in Teaching and Learning Science and Mathematics	Nelie D. Sacman, EPS, Science
10:15–10:30 a.m.	Health Break	
10:30 – 12:00 n.n.,	Plenary 2: Improvisation and Developing an Improvisational Mindset	Winnie W. Poli, EPS, Mathematics
12:00 – 1:00 p.m.	LUNCH	
1:00 – 2:00 p.m.	Plenary 3: Improvisation and Design Thinking for Science and Mathematics	Ferry E. Reyes (Science) Cristine Cruz (Mathematics)
2:00 – 5:00 p.m.	Workshop 1: Instrumentation and Improvisation in Science and Mathematics	Ferry E. Reyes (Science) Donnabel T. Castellones (Math)
Day 2 (December 9, 2023)		
8:00 – 8:30 a.m.	MOL	TWG
8:30 – 10:00 a.m.	Workshop 2: Using Instrumentation and Improvisation for Inquiry-Based Lessons	Ferry E. Reyes (Science) Donnabel T. Castellones (Math)
10:15 – 10:30 a.m.	Health Break	
10:30 – 12:00 n.n.	Workshop 3: Developing Stem Skills Through Student-LED Improvisation	Ferry E. Reyes (Science) Cristine Cruz (Mathematics) Teacher II, MNHS-Main (JHS)
12:00 – 1:00 p.m.	LUNCH	
1:00 – 3:00 p.m.	Workshop 4: The Use of Instruments and Improvised Materials in Assessment	Ferry E. Reyes (Science) Cristine Cruz (Mathematics) Teacher II, MNHS-Main (JHS)
3:00 – 5:00 p.m.	Workshop 4: Preparing Lessons Using Instruments and/or Improvised Materials	Nelie D. Sacman EPS, Science Winnie W. Poli EPS, Mathematics
Day 3 (December 15 2023)		
8:00 – 8:30 a.m.	MOL	TWG
8:30 – 12:00 n.n.	Presentation and Critiquing of Lessons	Nelie D. Sacman, EPS, Science Winnie W. Poli, EPS, Mathematics
12:00 – 1:00 p.m.	Lunch	
1:00 – 3:00 p.m.	Presentation and Critiquing of Lessons	Nelie D. Sacman, EPS, Science Winnie W. Poli, EPS, Mathematics
3:00 – 4:00 p.m.	Closing Ceremonies	TWG



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Enclosure No.2 to Schools Division Memorandum No. 426, s. 2023

List of Participants

School	Science	Math
Curva IS	1. Cherryln P. Natividad	
Maligaya IS		1. Dannielle Mae T. Chuidian
Magtanggol IS	1. Renalyn P. Martin (JHS)	1. Ferlyn M. Mempin (JHS) 2. Mildred Umipig (SHS)
Maragol IS	1. Liezel A. Dela Cruz (JHS)	1. Catherine C. Paragonson (JHS)
Gabaldon IS	1. Judy Caroline P. Catacutan 2. Jedidah Navarro(JHS)	1. Arlene Dimacale 2. Claudia Barias (JHS)
San Antonio IS	1. Ferry E. Reyes 2. Analiza S. Galindez 3. Floro B. Fernandez, Jr. (SHS) 4. Princess D. Santos (SHS) 5. Elena C. Lanuza (SHS)	1. Daisy L. Cantor 2. Donnabel T. Castellones 3. Jackielou H. Nery 4. Jay-are T. Libed (SHS)
Palusapis IS	1. Sheila Marie C. Undan (JHS) 2. Nikka Danichelle A. Elamparo (JHS) 3. Maorin Mari R. Santos (SHS)	1. Zenaida O. Abaya (JHS) 2. Marife D. Gagote (SHS) 3. Benjamin A. Mateo (SH)
MNHS Main JHS	1. Bulatao, Rolando M. 2. Calma, Roena R. 3. Carlos, Rebecca G. 4. Corpuz, Gina Fe C. 5. Cruz, Janelle A. 6. De Vera, Josephine H. 7. Esguerra, Catherine S. 8. Fajardo, Benilda P. 9. Fermin, Theresa D. 10. Juico, Christian C. 11. Juganas, Sunshine N. 12. Mazon, Nila F. 13. Parcasio, Daffodil B. 14. Ramos, Zenaida P. 15. Sampaga, Liezel M. 16. Roldan, Melanie O. 17. Santos, Elizabeth P. 18. Santos, Maricor V. 19. Serna, Marinela D. 20. Soto, Juanita B. 21. Serafica, Grace B. 22. Vioria, Charlie C. 23. Viola, Glenda L.	1. Abaya, Carlo C. 2. Cantor, Leny Dc. 3. Castillo, Jocelyn M. 4. Cruz, Christine 5. Dalusong, Liyssa S. 6. Fajardo, Menard Q. 7. Florblanco, Floyd T. 8. Fronda, Sybelle Clyde B. 9. Inigo, Jocelyn D. 10. Juganas, Liza C. 11. Natividad, Rafael Q. 12. Nicodemus, Jocelyn J. 13. Palada, Ma. Teresa P 14. Papalis, Alberto H. 15. Pelagio, Francisco M 16. Salibay, Samson U. 17. Tadatada, Alpha Merryl B. 18. Tadatada, Patrick Harold B. 19. Umagat, Marivic C. 20. Villacorta, Elizabeth C.
MNHS Main	1. Asinas, Florenz T.	1. Asuncion, Jammie Danielle P.



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SHS	<ol style="list-style-type: none">2. Canoy, Mary Rose S.3. Cinense, William M.4. Flor Blanco, Gladys R.4. Garcia, James Mark S.5. Pascua, Crisanto A.6. Reyes, Czarina Y.7. Salazar, Lea Irish A.8. Selispara, Marita M.9. Valdez, Marie-Jo S.10. Mojica, Jennifer C.	<ol style="list-style-type: none">2. Cabrera, Cherry Mae B.3. Carurucan, Richard D.4. Celestino, Ma. Theresa F5. Limos, Gene Beniece B.6. Manlusoc, Kathlyn Joy M.7. Monserate, Cynthia C.8. Pangan, Jereme D.9. Santiago, Jun Francis P.
MNHS Annex	<ol style="list-style-type: none">1. Marivic O. Agito (JHS)2. Le-Ann A. Viloría (JHS)3. Arlene G. Quito (JHS)4. Josephine DC. De Vera (JHS)5. Sherlyn P. Fernandez (JHS)6. Jerry May Rosete (JHS)7. Eden Rose L. Gonzales (JHS)8 Rodel D. Zafra (SHS)9. Edgardo M Sinagub (SHS)	<ol style="list-style-type: none">1. Arlene C. Castaneda (JHS)2. Elsa A. Enriquez (JHS)3. Marisol C. Pascua (JHS)4. Ernesto C. Ravago Jr. (JHS)5. Judyline R. Gayap (JHS)6. John Paul V. Gonzales (SHS)7. Richard B. Rosete (SHS)



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Enclosure No. 3 to Schools Division Memorandum No. 416, s. 2023

PROGRAM MANAGEMENT TEAM

Consultants	JOHANNA N. GERVACIO PhD, CESO V Schools Division Superintendent
	ERLEO T. VILLAROS PhD OIC-Assistant Schools Division Superintendent
Chair	LARRY B. ESPIRITU PhD Chief ES- Curriculum Implementation Division
Co-chairs	Nelie D. Sacman PhD Winnie W. Poli Leilani D. Tidalgo EdD
Technical Working Group	Veronica M. Aquino Teresita Ventura Eva E. Garcia Alma Grace P. Corpuz Agnes C. Bengano Hederlyn L. Ferrer Helen V. Alvaran