



Republic of the Philippines
Department of Education

24 NOV 2015

DepEd MEMORANDUM
 No. 144, s. 2015

**TRAINING-WORKSHOP ON THE USE AND CARE OF ADVANCED SCIENCE
 EQUIPMENT AND SENSORS TO RECIPIENT RSHSs AND ESEP
 HIGH SCHOOLS SCIENCE TEACHERS**

To : Undersecretaries
 Assistant Secretaries
 Bureau and Service Directors
 Regional Directors
 Schools Division Superintendents
 Public Secondary School, Heads
 All Others Concerned

1. To ensure the maximum utilization and proper care of the Advanced Science Equipment and Sensors distributed to the Regional Science High Schools (RSHSs) and Engineering and Science Education Program (ESEP) High Schools nationwide, the Department of Education-National Science Teaching Instrumentation Center (DepEd-NSPIC) will facilitate the **Training-Workshop on the Use and Care of Advanced Science Equipment and Sensors to Recipient RSHSs and ESEP High Schools Science Teachers** by area on the following dates with respective venues and number of participants:

| Area | Region | Number of Recipient Schools | Number of Participants | Date | Venue |
|------------------|--------|-----------------------------|------------------------|------------------------|----------------------------------------|
| Luzon A | I | 7 | 14 | December 8-9 2015 | Baguio Teachers Camp Baguio City |
| | II | 7 | 14 | | |
| | III | 8 | 16 | | |
| | CAR | 3 | 6 | | |
| Sub-Total | | 25 | 50 | | |
| Luzon B | IV-A | 10 | 20 | December 14-15 2015 | NCR RELC Marikina City |
| | IV-B | 2 | 4 | | |
| | V | 8 | 16 | | |
| | NCR | 11 | 22 | | |
| Sub-Total | | 31 | 62 | | |
| Visayas | VI | 9 | 18 | December 17-18 2015 | Ecoltech Center Cebu City |
| | VII | 7 | 14 | | |
| | VIII | 2 | 4 | | |
| Subtotal | | 18 | 36 | | |
| Mindanao | IX | 4 | 8 | December 21-22 2015 | RELIC Davao City Region XI |
| | X | 7 | 14 | | |
| | XI | 5 | 10 | | |
| | XII | 4 | 8 | | |
| | Caraga | 3 | 6 | | |
| | ARMM | 1 | 2 | | |
| Sub-Total | | 24 | 48 | | |
| TOTAL | | 98 | 196 | | |

2. The Training-Workshop aims to:
- familiarize the science teachers with the functionality, operation, application and maintenance of the delivered equipment and sensors for maximum utilization of the equipment; and
 - raise their level of awareness and competence in the manipulation of the equipment and to have them cascade the knowledge and skills acquired to other science teachers in their respective areas.

3. The conduct of the Training-Workshop to be facilitated by the DepEd-NSTIC is in compliance with the requirement of the contract for project *Mass Production and Supply and Delivery of Science and Mathematics Equipment to 544 Public Secondary Schools, RSHSs and ESEP Schools* mentioned in Bid Bulletin No. 1, Paragraph XI, issued on December 28, 2012, in which Section V. Special Conditions of Contract (SCC), GCC Clause 6.2 was amended to include training of teachers, to wit:

For Lots 8 11, the following are the training data...The Supplier(s) will train the participants on the operation and maintenance of the Advanced Science Equipment and Computer-Aided Science Learning System. They should provide user's manual and sample experiments manual for equipment which will be used in experimentation.

4. The participants to this activity are the 196 science teachers from the RSHSs and ESEP High Schools carefully selected by their respective Regional and Schools Division Science Supervisors based on the criteria set by NSTIC. The training matrix is enclosed for reference.

5. Physics and Chemistry teachers are the target participants of the workshop. The regional directors are requested to ensure that their respective regions can send the required number of participants to the Training-Workshop so that the delivered advanced science equipment can be fully utilized during classroom instruction, and its operating life will be maximized or even extended. Participants are requested to bring reference materials such as textbook and laptops.

6. The following recipient schools nearest to the training venue are requested to bring the complete package of the advanced science equipment they received for use during the Training-Workshop:

| Venue | Recipient schools to bring complete package of the advanced science equipment |
|----------------------------------------|-------------------------------------------------------------------------------|
| Region XI RELC Davao City | Daniel R. Aguinaldo NHS (Matina NHS), Matina, Davao City |
| | Region XI Science HS, Mati, Davao Oriental |
| | Sto. Tomas NHS, Sto. Tomas, Davao del Norte |
| Baguio Teachers Camp Baguio City | Baguio City NHS, Baguio City |
| | Pangasinan NHS, Lingayen |
| | Urdaneta City NHS, Urdaneta |
| NCR RELC Marikina City | Sta Elena HS, Marikina City |
| | Quezon City Science IIS, Quezon City |
| | Ramon Magsaysay (Cubao) IIS, Quezon City |
| Ecotech Center Cebu City | Ocana NHS, Carcar City |
| | Naga NIS, Naga City |
| | Uling NIS, Naga City |

7. The participants who will bring their complete package of the advanced science equipment are requested to be at the training venue a day prior to Day 1 so that the NSTIC personnel can do the final evaluation of the condition of the equipment.

8. The first meal to be served will be lunch of the day prior to Day 1 and the last meal will be breakfast of the day after Day 2. Check-in will be 1:00 p.m. on the day prior to Day 1 while the check-out will be at 12:00 noon of the day after Day 2.

9. Payment of the board and lodging of the participants and facilitators, resource persons with allowable honoraria are chargeable to the Human Resource Training and Development (HRTD) Funds, while funds for the purchase of training materials, consumables and other related expenses will be charged to local funds, subject to the usual accounting and auditing rules and regulations.

10. For more information, all concerned may contact **Ms. Natalie O. Ols** or **Mr. Marvin S. Maquilas** at the Department of Education-National Science Teaching Instrumentation Center (DepEd-NSTIC), Ecotech Center, Sudlon, Lahug, Cebu City at telephone no. (032) 255-3633, telefax no. (032) 255-3005; mobile phone no. 0906-233-8659 or send a message through email address: depednstic@yahoo.com.

11. Immediate dissemination of this Memorandum is desired.


BR. ARMIN A. LUISTRO FSC
Secretary

Encl.:

As stated

Reference:

N o n e

To be indicated in the Perpetual Index
under the following subjects:

EQUIPMENT
LEARNING AREA, MATHEMATICS
SCHOOLS

SCIENCE EDUCATION
TEACHERS
TRAINING PROGRAMS

In Service Training on Use and Care of Science Equipment with Content Enrichment for Science Teachers of NSIC Advance Science Equipment Recipient RSHS and RSEP Schools, on the following venues and dates.

Davao City RCCT - **December 21-22, 2015** for Mindanao Cluster Recipient Schools

Baguio City Teachers'Camp - **December 8-9, 2015** for Region I, Region II, Region III, CAR Cluster Recipient Schools

Marikina City RSCC - **December 14-15, 2015** for NCR, Region IV-A, Region IV-B, Region V Cluster Recipient Schools

Cebu City FOSTECH CCFMTR - **December 17-18, 2015** for Visayas Cluster Recipient Schools

| DAY/TIME | 8:00 - 8:30 | 8:30 - 10:00 | 10:00 - 12:00 | 12:00-1:00 | 1:00 - 3:00 | 3:00 - 5:00 |
|----------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Day 1 | Opening Program Overview of Activities | SESSION 1 EQUIPMENT : 1. Operating Electronic Balance 2. Magnetic Stirrer 3. Test Tube 4. Rubber stopper 5. Graduated Cylinder | SESSION 2 EQUIPMENT : 6. Microscope, Oil Immersion 7. Staining Microscope 8. Cover slip (misc. items) 9. Glass slide (misc. items) | L U N C H | SESSION 3 EQUIPMENT : 10. Variable Micropipettes with Single Tip 11. 10x Oscilloscope 12. AM-FM Radio Demodulator | SESSION 4 EQUIPMENT : 13. Horse Table 14. Basic Radio, Two KI (Geiger Counter) |
| | | SESSION 3 EQUIPMENT : 1. Motion Sensor 2. Force Sensor 3. Voltage/Current Sensor 4. Conductivity Sensor 5. Magnetic Field Sensor 6. Light Sensor | SESSION 2 EQUIPMENT : 7. Temperature/Surface Temp. Sensor 8. Water Quality, Salinity Sensor 9. Carbon Dioxide Gas Sensor 10. Oxygen Gas Sensor 11. Barometer, Low Pressure Sensor 12. Various Ecology System | | SESSION 3 EQUIPMENT : 13. Barometric/Low Pressure Sensor 14. Absolute Pressure Sensor 15. High Accuracy Deep Sea Probe 16. CO2 Printer 17. pH Sensor | SESSION 4 EQUIPMENT : 18. Conductivity Sensor 19. Weather/Anemometer Sensor 20. Humidity Sensor 21. GPS Position Sensor 22. Soil Moisture Sensor |
| Day 2 | Introduction of Computer Aided Science Learning System (iScience and iScience 2.0) | SESSION 3 EQUIPMENT : 1. Motion Sensor 2. Force Sensor 3. Voltage/Current Sensor 4. Conductivity Sensor 5. Magnetic Field Sensor 6. Light Sensor | SESSION 2 EQUIPMENT : 7. Temperature/Surface Temp. Sensor 8. Water Quality, Salinity Sensor 9. Carbon Dioxide Gas Sensor 10. Oxygen Gas Sensor 11. Barometer, Low Pressure Sensor 12. Various Ecology System | B R E A K | SESSION 3 EQUIPMENT : 13. Barometric/Low Pressure Sensor 14. Absolute Pressure Sensor 15. High Accuracy Deep Sea Probe 16. CO2 Printer 17. pH Sensor | SESSION 4 EQUIPMENT : 18. Conductivity Sensor 19. Weather/Anemometer Sensor 20. Humidity Sensor 21. GPS Position Sensor 22. Soil Moisture Sensor |

Scope of Training :

1. Discussion of equipment features
2. Demonstration of operational procedures
3. Hands-on activities by recipient participants
4. Safety and health precautionary measures

NOTE : All sessions are plenary

Schedule subject to change, weather and other factors as may arise