



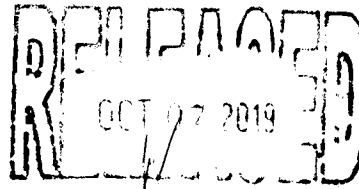
Republic of the Philippines  
DEPARTMENT OF EDUCATION  
**CORDILLERA ADMINISTRATIVE REGION**

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October 2, 2019

**Regional Memorandum**  
No. 329.2019



DEPED-CAR

**DOWNLOADING OF FUNDS FOR THE PROCUREMENT  
OF SCIENCE AND MATH EQUIPMENT**

**To: Schools Division superintendents  
All Divisions**

1. Please be informed that funds for the procurement of Science and Mathematics Equipments (SME) are downloaded to identified schools in your division under the project **Mass Production and supply and Delivery of Science and Mathematics Equipment Packages to 686 Junior High Schools for Grades 7 to 10, and Mass Production and Delivery of Science and Mathematics Equipment Packages to 402 Public Senior High Schools for Grades 11 and 12.**
2. Recipient Schools for grades 7 to 10, and Grades 11 to 12 with the number of equipment packages per school are attached as annex A.
3. List of equipment per package for grades 7 to 10 are attached as annex B.
4. List of equipment per package for grades 11 and 12 are attached as annex C.
5. Immediate dissemination of this Memorandum is desired.

CLMD/EMF/acm

**MAY B. ECLAR, PhD, CESO V**  
Regional Director



ISO 9001:2015 Certified  
**Quality Management System**  
DE-50500784 QM15

**Annex A**

**1. Project: MASS PRODUCTION AND SUPPLY AND DELIVERY OF SCIENCE AND MATHEMATICS EQUIPMENT PACKAGES TO PUBLIC JUNIORHIGH SCHOOLS FOR GRADES 7 TO 10**

**Number of schools: 5**

	Division	School Name	School ID	No. of sets of SME	Amount
1	Abra	Abra HS	305075	4	15,560.50
2	Baguio	Pines City NHS	305281	4	15,560.50
3	Baguio	Baguio City HS - Main	305269	6	23,340.75
4	Benguet	Benguet NHS	305133	5	19,450.625
5	Tabuk City	Tabuk City NHS	305221	5	19,450.625
		Total			<b>Php 93,363.00</b>

**2. MASS PRODUCTION AND SUPPLY AND DELIVERY OF SCIENCE AND MATHEMATICS EQUIPMENT PACKAGES TO SENIOR HIGH SCHOOLS FOR GRADES 11 AND 12**

**Number of Schools: 11**

	Division	School Name	School ID	No. of sets of core SME	Amount
1	Abra	Gaddani NHS	305086	1	40,288.818
2	Apayao	Apayao Science HS	305107	1	40,288.818
3	Apayao	Sta. Marcela NHS	305109	1	40,288.818
4	Baguio	Mil-an NHS	305275	1	40,288.818
5	Benguet	Gov. Bado Dangwa AIS – Ext. (Taba-ao)	318908	1	40,288.818
6	Benguet	Madaymen NHS	305154	1	40,288.818
7	Ifugao	Mayoyao NHS	305185	1	40,288.818
8	Kalinga	Magtoma Pangol NHS - Main	305211	1	40,288.818
9	Mt Province	Lubon NHS	305247	1	40,288.818
10	Mt. Prov	Butigue NHS	305239	1	40,288.818
11	Tabuk city	Nambaran Agro-Industrial NHS	305212	1	40,288.818
		Total		11	<b>Php 443,176.998</b>

REPOSITORY OF TRAINING SOURCES CENTER

PROJECT: MASS PRODUCTION AND SUPPLY AND DELIVERY OF DEFENSE AND WATER BATTERY EQUIPMENT PACKAGES TO 686 PUBLIC JUNIOR HIGH SCHOOLS FOR GRADES 7 TO 10

67-610 SCI-PGE AND MATHEMATICS EQUIPMENT:

	DESCRIPTION	Unit of Issue	Quantity per Package
<b>MASS PRODUCTION:</b>			
<b>A. BASIC AND MECHANICS SCIENCE EQUIPMENT:</b>			
A.1)	Basic Science Equipment:		
A.1.1	Stand Base Assembly	assy	10
A.1.2	Stand Support	pc	20
A.1.3	Ring with clon	pc	5
A.1.4	Ø9.5mm x 250mm long Stand Rod	pc	10
A.1.5	Ø9.5mm x 500mm long Stand Rod	pc	10
A.1.6	Ø12.7mm x 1000mm long Stand Rod	pc	5
A.1.7	Multi-Loop Assembly	assy	25
A.1.8	Universal Doghead Assembly	assy	10
A.1.9	Universal Clamp Assembly	assy	10
A.1.10	Test Tube Holder	pc	6
A.1.11	Test Tube Rack	pc	6
A.1.12	Case 001 (with Cover and Base Sheathing)(BASIC)	pc	1
A.1.13	Case 002 (with Cover and Base Sheathing)(BASIC)	pc	1
A.1.14	Case 003 (with Cover and Base Sheathing)(BASIC)	pc	1
A.1.15	User's Manual (BASIC)	pc	1
A.2)	Mechanics Science Equipment:		
A.2.1	Cart and System Set		
	A.2.1.1) Rail	lb	10
	A.2.1.2) Leveling Pad Assembly	assy	5
	A.2.1.3) Cart-spring loaded	unit	5
	A.2.1.4) Cart-with counterweight	unit	5
	A.2.1.5) Stopper-Fork Assembly	assy	5
	A.2.1.6) Diving Mass, 3-gram	pc	25
	A.2.1.7) Cylindrical Mass, 50-gram	pc	25
	A.2.1.8) Plastic Hammer	pc	5
	A.2.1.9) Motorized Cart	unit	5
	A.2.1.10) Hose Level, 3-meter	lb	5
A.2.2	Free-Fall Apparatus Set		
	A.2.2.1) Solenoid Assembly	assy	5
	A.2.2.2) Pad Switch Assembly	assy	5
	A.2.2.3) Synchro Box Assembly	assy	5
	A.2.2.4) Digital Timer Assembly (Digital Stopwatch)	assy	5
	A.2.2.5) Ø 25mm Plastic Spherical Ball with metal screw	pc	10
	A.2.2.6) Ø 25mm Steel Spherical Ball	pc	10
	A.2.2.7) Ø 12.7mm Steel Spherical Ball	pc	10
	A.2.2.8) Ball Case (with Cover and foam)	pc	5
	A.2.2.9) Meter/tape with hooks Assy (w/ plastic pointer)	assy	5
A.2.3	Hooke's Law Apparatus (1 set is composed of 1 helical spring and 1 disc pointer)	set	5
A.2.4	Friction Apparatus (1 set is composed of 1 friction block and 1 friction board)	set	5
A.2.5	Lever Assembly (1 assembly is composed of 1 lever beam and 1 axle)	assy	5
A.2.6	Pulley Set		
	A.2.6.1) Double Pulley Assembly	assy	10
	A.2.6.2) Single Pulley Assembly	assy	10
A.2.7	Spring Balances		
	A.2.7.1) 10-Newton Spring Balance Assembly	assy	5
	A.2.7.2) 5-Newton Spring Balance Assembly	assy	5
	A.2.7.3) 2-Newton Spring Balance Assembly	assy	5
A.2.8	C-Clamp with hook	pc	10
A.2.9	Hooked Masses		
	A.2.9.1) 500-gram Hooked Mass	pc	5
	A.2.9.2) 250-gram Hooked Mass	pc	10
	A.2.9.3) 20-gram Hooked Mass	pc	25
A.2.10	Case 001 (with Cover and Base Sheathing)(MECHANICS)	pc	1
A.2.11	Case 002 (with Cover and Base Sheathing)(MECHANICS)	pc	1
A.2.12	Case 003 (with Cover and Base Sheathing)(MECHANICS)	pc	1
A.2.13	Spare Parts		
	A.2.13.1) Worm with Axle Assembly	assy	5

PARTICULARS		Unit of Issue	Qty per Pack/lot
	A 2 (B 2) Worm Gear A	pc	10
	A 2 (B 3) Spur Gear B	pc	10
	A 2 (B 4) Spur Gear C	pc	5
A 2 14	User's Manual (MECHANICS)	pc	1
A 2 15	Experiment Module (MECHANICS)	pc	1
A 2 16	Dry Cell, 1.5 V, size AA	pc	5
A 2 17	Modelling Clay	bar	5
A 2 18	String (66 L)	ball	5
A 2 19	String (6mm)	ball	5
<b>B. SCIENCE AND MATHEMATICS EQUIPMENT:</b>			
B 1	NSTIC-developed Blackboard Compass	pc	4
B 2	NSTIC-developed Blackboard Protractor	pc	4
B 3	NSTIC-developed Convection Tank (Thermocline Apparatus)	pc	5
B 4	NSTIC-developed Heat Conductivity Apparatus	pc	5
B 5	NSTIC-developed Light Source	pc	5
B 6	NSTIC-developed Set of Coils (Transformer)	set	5
B 7	NSTIC-developed Tripod	pc	5
B 8	NSTIC-developed Variable Power Supply with 5 pcs Terminal Board	set	3
B 9	NSTIC-developed Wire Gauze	pc	5
<b>C. STORAGE CABINETS:</b>			
C 1	Biology Storage Cabinet, for non-corrosive materials	pc	2
C 2	Chemistry Storage Cabinet, for non-corrosive materials	pc	1
C 3	Chemistry Storage Cabinet, stainless steel, for corrosive materials	unit	1
C 4	Earth & Space Science Storage Cabinet, for non-corrosive materials	pc	2
C 5	Mathematics Storage Cabinet, for non-corrosive materials	pc	1
C 6	Physics Storage Cabinet, for non-corrosive materials	pc	2
<b>Market Items:</b>			
<b>D. SCIENCE EQUIPMENT, SUPPLIES, AND CONSUMABLES:</b>			
D 1	Aneroid Barometer Set (Demonstration Type)	unit	1
	Aneroid Barometer Set (Wall Type)	unit	1
	Cork Stopper # 16 with 1 hole	pc	10
D 2	Cork Stopper # 16 with 2 holes	pc	10
	Cork Stopper # 5 (for Ø 16mm test tube)	pc	30
D 3	Dry Cell, 9 V	pc	5
	Dry Cell, 1.5 V, size D	pc	20
D 4	Hand Lens, 10x magnification (Loupe 10x magnifier)	pc	1
	Hand Lens, at least 5x magnification (Minimum Lens Diameter: 50 mm)	pc	5
	Rubber Stopper # 0 (for Ø 16mm test tube)	pc	1
D 5	Rubber Stopper # 6 with 1 hole	pc	10
	Rubber Stopper # 6 with 2 holes	pc	10
	Set of Connectors (# 18 copper, AWG stranded):		
	Black, 350mm long with alligator clip on one end and banana plug on the other end	pc	15
D 6	Red, 350mm long with alligator clip on one end and banana plug on the other end	pc	15
	White, 350mm long with alligator clip on one end and banana plug on the other end	pc	10
	Blue, 350mm long with alligator clip on one end and banana plug on the other end	pc	10
	Set of Tools:	set	1
	Screwdriver, flat, 6", 1 pc/set		
	Screwdriver, phillips, 6", 1 pc/set		
	Long Nose Pliers, 6", 1 pair/set		
	Mechanical Wire Cutter and Pliers, 6.5", 1 pair/set		
D 7	Soldering Iron, 60 watts, 1 pc/set		
	Ball Pencil Hammer, handle length is 11", 350g approx. weight, 1 pc/set		
	Precision Screwdrivers Set, 6 pcs/set, with plastic casing, 1 set/set		

	PAINTING, ETC.	Unit of Issue	Quantity (See Appendix)
	Two covers, stainless steel, with curved tips, 6" long, 1 pair/set Galvanneal Lead, 41mm, Grade 60/40, 1M, 1 pair/set, 1 pair/set Rubbering Paper, 50 grams/roll, 1 roll/set		
<b>D. GLASS WARE:</b>			
	Beaker, 100 ml, borosilicate	pc	20
	Beaker, 200 ml, borosilicate	pc	5
F-1	Beaker, 250 ml, borosilicate	pc	20
	Beaker, 50 ml, borosilicate	pc	10
	Beaker, 500 ml, borosilicate	pc	10
F-2	Graduated Cylinder, 10 ml, capacity	pc	25
	Graduated Cylinder, 100 ml, capacity	pc	25
F-3	Reagent Bottle, narrow mouth, amber glass (250 ml, capacity)	pc	5
	Reagent Bottle, wide-mouth, transparent glass (250 ml, capacity)	pc	5
F-4	Vial, screw-neck, 25 ml, (with screw-type plastic cap)	pc	20
	Vial, screw-neck, 50 ml, (with screw-type plastic cap)	pc	10
<b>E. SCIENCE EQUIPMENT, SUPPLIES, AND CONSUMABLES:</b>			
F-1	Basic Lens Set, acrylic	set	5
F-2	Beaker Tong	pc	5
F-3	Bunsen Burner, gas type	unit	5
F-4	Cool Boxes	set	5
F-5	Cup Anemometer with Wind Vane, handheld, digital direct reading	unit	5
F-6	DC Ammeter	unit	5
F-7	DC Voltmeter	unit	5
F-8	Desk Lamp, Heavy Base	unit	5
F-9	Drying Tray Set with pan	set	5
F-10	Dry Cell Holder, for single size D dry cell	pc	20
F-11	Electronic Pocket Scale, 120g capacity	unit	5
F-12	Filter Paper, ordinary, 600mm x 600mm sheet	sheet	50
F-13	Galvanometer	unit	5
F-14	Gloves, acid/solvent resistant, super nitrile	pair	20
F-15	Helical Spring	pc	10
F-16	Hexagonal Weight Dishes Set, 50ml, 500 pcs/pack	pack	4
F-17	Laboratory Hot Plate	unit	4
F-18	Random Demonstration Kit	kit	5
F-19	Laser Light, line laser type	pc	5
F-20	Lens Paper, 50's/pack	pack	10
F-21	LEGO Tank with Gears, 11 kg, capacity, with accessories	unit	4
F-22	Magnetic Compass	pc	5
F-23	Miniature Light Bulb Holder Assembly	assy	15
F-24	Mirror Set, acrylic	set	5
F-25	Pair of Bar Magnets	pair	5
F-26	pH Meter, range 0 to 14 Ph	unit	4
F-27	Press	pc	5
F-28	Rain Gauge	unit	5
F-29	Reaction Plates with 6 Wells	pc	5
F-30	Reed Meter Board	unit	5
F-31	Ring and Ball Apparatus	unit	5
F-32	Rock Samples, 24 pcs/set, (minerals of 3 rock types)	set	4
F-33	Safety Goggles, polycarbonate	pair	20
F-34	Sedimentator Tube	pc	10
F-35	Slint Psychrometer	unit	5
F-36	Stool, Cool, metal	unit	10

PARTICULARS		Unit or Issue	Approximate Value (Rs.)
I-37	Soil pH, Cardboard, Standard Paper	unit	1
I-38	Soil Colors	unit	1
I-39	Stops/stop by, digital	pr	10
I-40	Empirical Glasses	bag	1
I-41	Swath by Tube type	unit	1
I-42	Lechem's Dispersion States Model (Demonstration Kit)	kit	1
I-43	Test Tube Brush	pr	10
I-44	Beaker Taper Set	set	1
I-45	Triple beam Electronic Balance	unit	1
I-46	Temple Vortex Bubble Comparator	pr	10
I-47	Universal pH Paper, pH 0-14, 100 strips/pack	pack	1
<b>G. MATHEMATICS EQUIPMENT:</b>			
G-1	Compass (for Student)	pr	10
G-2	Compass (T.V. Kit)	pr	1
G-3	Graphing board, 1.2m x 1m, green, movable	unit	1
G-4	Graphing Calculator, non projectable	unit	1
G-5	Probability Kit	kit	1
G-6	Protractor (for Student)	pr	10
G-7	Scientific Calculator	unit	10
<b>H. 3D MODELS AND GLOBES:</b>			
H-1	Animal Cell Model	unit	1
H-2	Geological Globe	unit	1
H-3	Cross section Volcano Model	unit	1
H-4	DNA Model	unit	1
H-5	Earth Globes, ordinary	unit	1
H-6	Geometrical model set, 2 types of cones	set	1
H-7	Geometrical model set, 2 types of cylinders	set	1
H-8	Geometrical model set, 3 types of prisms	set	1
H-9	Geometrical model set, 3 types of pyramids	set	1
H-10	Geometrical model set, Spheres	set	1
H-11	Model of Circle in a Cylinder	set	1
H-12	Model of Earth Internal Structure, 1/4 part detachable, 30-32" maximum	unit	1
H-13	Model of Pyramid in a Prism	set	1
H-14	Model of Sphere in a Cylinder	set	1
H-15	Model, Animal Mitosis	unit	1
H-16	Model, Animal Mitosis	unit	1
H-17	Model, Human Mitosis	unit	1
H-18	Model, Human Torso	unit	1
H-19	Motor Generator Model Experiment Set	set	1
H-20	Plant Cell Model	unit	1
H-21	Planet Globe	pr	1
H-22	Synonograph Model	unit	1
H-23	Solar System Model	unit	1
H-24	Student Organic Chemistry Molecular Model Set	set	1
H-25	Simplest Orbitals of the Atom Models (Quantum Models)	set	1
H-26	Van der Waals Force Model, 1/4 part detachable, 32cm diameter	unit	1
H-27	Van Der Waals Force Model	unit	1
<b>I. GLASSWARE, PLASTIC WARES, AND PORCELAIN WARES:</b>			
I-1	Alcohol Burner, glass, 150 ml Capacity	pr	10
I-2	Alcohol Burner, metal, 200 ml Capacity	pr	10
I-3	Beakers, Apparatus, student type	pr	10

PARTICULARS		Unit of measure	Qty per lot or Package
I.4	Columeyer Flask, 250 ml, borosilicate	pc	25
I.5	Evaporating Dish, 75 ml capacity	pc	25
I.6	Glass Funnel	pc	15
I.7	Graduated Cuv, 250 ml capacity, plastic, transparent	pc	5
I.8	Graduated Pipette, 10 ml, with rubber pipette	pc	5
I.9	Metre stick, plastic	pc	10
I.10	Mortar and Pestle, porcelain	pc	15
I.11	Petri Dish	pc	10
I.12	Spatula, porcelain and glass	pc	5
I.13	Stirrer Rod, 0.5cm, 250mm long	pc	10
I.14	Test Tube, 0.16cm, 150mm long	pc	100
I.15	Volumetric Flask, 250 ml	pc	5
I.16	Wash Bottle, plastic, 250 ml	pc	20
I.17	Watch Glass	pc	10
<b>J. CHEMICALS:</b>			
J.1	Copper Sulfate, CuSO <sub>4</sub> , 100 grams / bottle	bottle	5
J.2	Hydrochloric Acid, HCl, laboratory grade, 500ml / bottle	bottle	5
J.3	Hydrochloric Acid, HCl, technical grade, 500 ml / bottle	bottle	5
J.4	Magnesium Ribbon, 25 grams/roll (60 to 75 feet long)	roll	25
J.5	Manganese Dioxide, 50 grams / bottle	bottle	5
J.6	Phenolphthalein Indicator, 100 grams / bottle	bottle	5
J.7	Potassium Chloride, 100 grams / bottle	bottle	5
J.8	Potassium Iodide, 100 grams / bottle	bottle	5
J.9	Sodium Hydroxide (Lye), 250 grams / bottle	bottle	5
J.10	Sulfur Powder, 100 grams / bottle	bottle	5
J.11	Sulfuric Acid, technical grade, 500 ml / bottle	bottle	5
J.12	Zinc Chloride, 100 grams / bottle	bottle	5
J.13	Zinc metal, pellets/moggy, 100 grams / bottle	bottle	5

Department of Education  
 BUREAU OF LEARNING RESOURCES (BLR)  
 PROJECT: MASS PRODUCTION AND SUPPLY AND DELIVERY OF SCIENCE AND MATHEMATICS EQUIPMENT  
 PACKAGES TO 402 PUBLIC SENIOR HIGH SCHOOLS FOR GRADES 11 AND 12

G.11-G.12 SCIENCE AND MATHEMATICS EQUIPMENT:

Item No.	EQUIPMENT / INSTRUCTIONAL MATERIALS	Unit of Issue	Qty per Set or Qty per Package
<b>MASS PRODUCTION:</b>			
<b>A) SCIENCE EQUIPMENT (CART-RAIL SYSTEM &amp; STAND SETUP):</b>			
	NSTIC-developed Cart-Rail System	unit	8
	Cart, spring loaded	unit	8
	Cart with counterweight	pc	40
	Cylindrical Mass, 50-gram	pc	40
	Driving Mass, 1-gram	assy	8
	Leveling Pad Assembly	pc	8
	Plastic Hammer	pc	8
	Storage Case 002 (with Cover and Base Sheathing)(Mechanics)	lh	16
	Rail	assy	8
	Stopper-Fork Assembly		
	NSTIC-developed Stand Setup	pc	24
	Stand Base	pc	32
	Stand Support	lh	16
A.1	Stand Rod Ø 9.5mm x 250mm long	lh	8
	Stand Rod Ø 9.5mm x 500mm long	assy	8
	Multiclamp Assembly	assy	16
	Universal Posthead Assembly	assy	16
	Universal Clamp Assembly	pc	8
	Ring with stem	pc	8
	Wire Gauze	pc-R	8
	Motorized Cart	lh	8
	Hose Level, 3-meter	pc	8
	Dry Cell, 1.5 V, size AA	bat	8
	Modelling Clay	ball	8
	String (thick)	ball	8
	String (thin)	pc	1
	Plastic Storage Box		
<b>B) SCIENCE EQUIPMENT (TRANSFORMER, POWER SUPPLY, &amp; TRIPOD):</b>			
	NSTIC-developed Set of Coils (Transformer)	set	8
B.1	NSTIC-developed Tripod	pc	8
	NSTIC-developed Variable Power Supply with 5 pcs. Terminal Board	set	2
<b>C) STORAGE CABINETS FOR SCIENCE EQUIPMENT:</b>			
C.1	Storage Cabinets (for non-corrosive materials)(for Science)	unit	2
<b>MARKET ITEMS:</b>			
<b>D) SCIENCE EQUIPMENT:</b>			
D.1	Balance, triple beam	unit	9
D.2	Desk Lamp, Heavy Base	unit	2
D.3	Diffraction slits & Diffraction grating Set	set	8
D.4	Dissecting Set with pan	set	8
D.5	Electronic Pocket Scale, 120g capacity	unit	8
D.6	Hexagonal Weigh Dishes Set, 50ml., 500 pcs/package	pack	8
D.7	Landform Demonstration Kit	kit	5
D.8	Laser Light, line laser type	unit	8
D.9	Microscope, Compound, 4 Objectives	unit	16
D.10	Ripple Tank Set	set	4
D.11	Sedimentation Tube	pcs	20
D.12	Soil pH, Moisture, Sunlight Meter	pcs	8
D.13	Soil Sieve	set	1
D.14	Strobe Light	unit	1
D.15	Tectonics Demonstrator Model (Demonstration Kit)	kit	1
D.16	Telescope, astronomical	unit	1



Item No.	EQUIPMENT / INSTRUCTIONAL MATERIALS	Unit of Issue	Qty per Set or Qty per Package
D.17	Vacuum Tube and Manual Vacuum Pump	set	8
<b>E) MATHEMATICS EQUIPMENT:</b>			
E.1	Graphing Calculator, non-projectable	unit	8
E.2	Scientific Calculator	unit	8
<b>F) 3D MODELS AND GLOBES:</b>			
F.1	Celestial Globe	unit	1
F.2	Fossil History 3D Model, with plastic fossil replica	unit	1
F.3	Model of Earth Internal Structure, 1/3 part detachable, Ø 12" minimum	Unit	1
F.4	Model, Human Torso	Unit	1