



DEC 15 2009

DepEd O R D E R  
No. **118**, s. 2009

PRESCRIBING THE LIST OF SCIENCE AND MATHEMATICS EQUIPMENT, LABORATORY  
GLASSWARE AND CONSUMABLES FOR ALL YEAR LEVELS OF ELEMENTARY  
AND SECONDARY SCIENCE SUBJECTS

To: Bureau Directors  
Directors of Services, Centers and Heads of Units  
Regional Directors  
Schools Division/City Superintendents  
All Others Concerned

1. The Department of Education (DepEd)-National Science Teaching and Instrumentation Center (NSTIC), Bureau of Elementary Education (BEE), Bureau of Secondary Education (BSE) and the University of the Philippines-National Institute of Science and Math Education (UP-NISMED) conducted a two-day Consultative Meeting on March 5-6, 2009 at the BSE Conference Room.
2. During the consultative meeting, the participants were able to produce complete listings of Science and Mathematics Equipment, Laboratory Glassware and Consumables.
3. The listings were based on the following:
  - a. Philippine Elementary School Learning Competency (PESLC);
  - b. Philippine Secondary School Learning Competency (PSSLC); and
  - c. Basic Education Curriculum (BEC).
4. The enclosed complete listings is hereby prescribed by the DepEd as the standard lists that will serve as the main reference for classroom instructions, procurement purposes and any related applications.
5. All procurement of Science and Mathematics Equipment, Laboratory Glassware and Consumables at the Central/Regional/Division and School levels should be based on the aforesaid listings.
6. Regional/Division Offices and Schools are enjoined to make use of the listings of any related applications.
7. Immediate dissemination of and compliance with this Order is directed.

  
JESLI A. LAPUS  
Secretary

Encls.: As stated  
Reference: None  
Allotment: 1—(D.O. 50-97)  
To be indicated in the Perpetual Index  
under the following subjects:

EQUIPMENT

LISTS

Sheila, MPPD-TS, DO Prescribing the List of Science and Math Equipment  
October 14, 2009



(Enclosure No. 1 to DepEd Order No. 118, s. 2009)

Department of Education

**PRESCRIBED MATHEMATICS INSTRUCTIONAL MATERIALS FOR PUBLIC ELEMENTARY SCHOOL PER BEC**

Item No.	Name of Instructional Material	Qty per school	Unit
1	EQUIPMENT :		
	1) Abacus	20	pcs
	2) Building Blocks, different colors	100	pcs
	3) Rubber Stamps of Numbers (with math operations) & Shapes	28	pcs
	4) Hundreds Board	20	pcs
	5) Cuisenaire	20	pcs
	6) Dice, big size	2	pcs
	7) Dice, standard size (for Student)	20	pcs
	8) Domino Set, 28 pcs/set	10	sets
	9) Number Blocks (@ 15 pcs/set)	10	sets
	10) Number Line Board, blackboard, 200mm x 1000mm	1	pc
	11) Number Line Board, student, 80mm x 400mm	10	pcs
	12) Addition-Subtraction-Multiplication-Division Wheel, Ø 500mm	3	pcs
	13) Place Value Box (with 4 colors counting bars)	3	pcs
	14) Place Value Board	3	pcs
	15) Fraction Set	3	sets
	16) Fraction Wheel, Ø 500mm :	3	pcs
	17) Dissectable Decimal Cube Set	10	pcs
	18) Tangrams	20	sets
	19) Template, shapes	20	pcs
	20) Polygons (triangle, square, pentagon, hexagon, heptagon, & octagon)	3	sets
	21) Protractor, blackboard	1	pc
	22) Compass, blackboard	1	pc
	23) Compass, student	20	pcs
	24) Geoboard, square on one face & circular on the other face	20	pcs
	25) Triangles Set, blackboard (Right, Isosceles, & Equilateral)	1	set
	26) Solids for spatial figures: Pyramid, Cone, Sphere, Prism, Cylinder	3	sets
	27) Collapsible Solids (Pyramid, Cube, Prism)	3	sets
	28) Geostrips	10	sets
	29) Manipulative Clock, blackboard	1	pc
	30) Manipulative Clock, student	10	pcs
	31) Digital Clock, table, with date, day, and alarm	3	units
	32) Stopwatch, digital	3	pcs
	33) Meterstick, wood	10	pcs
	34) Triangle, 45° x 45°, blackboard	3	pcs
	35) Triangle, 30° x 60°, blackboard	3	pcs
	36) Tape Measure, max. capacity = 1 meter	20	pcs
	37) Trundle Wheel	5	units
	38) Double-pan Balance	10	units
	39) Weighing Scale, analog, max. capacity = 5 kg.	3	units
	40) Weighing Scale, digital, max. capacity = 5 kg.	1	unit

**PRESCRIBED MATHEMATICS INSTRUCTIONAL MATERIALS FOR PUBLIC ELEMENTARY SCHOOL PER BEC**

Item No.	Name of Instructional Material	Qty per school	Unit
	41) 5-Newton Spring Balance	3	units
	42) Square Units, 10 cm x 10 cm (exact measurement)	20	pcs
	43) Square Units, 20 cm x 20 cm (exact measurement)	20	pcs
	44) Frames of Solids: Cube, Cylinder, and Pyramid	10	sets
	45) Box Frame Skeleton with plastic cubes	10	sets
	46) Manipulative Electric Meter Model, blackboard	10	pcs
	47) Manipulative Water Meter Model, board	10	pcs
	48) Graphing Board, 1000 x 1300mm	3	pcs
	49) Overhead Projector	1	unit
	50) PC, complete with accessories and printer	1	unit
	51) Simple Calculator (for Teacher)	1	unit
	52) Simple Calculator (for Student)	20	units
	53) White Board with stand and wheels	1	unit
	54) Pocket Chart	1	pc
	55) Multiplication Board	20	pcs
II	GLASSWARES / PLASTIC WARES		
	1) Alcohol Thermometer, -10°C - 110°C	10	pcs
	2) Graduated Cylinder, 50 ml., borosilicate glass	10	pcs
	3) Beaker, 500 ml., borosilicate glass	10	pcs
	4) Measuring Cup, plastic	10	pcs
	5) Measuring Spoon, plastic	10	pcs
	6) Plastic Containers (of different sizes)	10	pcs
	7) Beads, Ø16mm, colors: white, black, blue, red, & yellow	500	pcs
	8) Plastic Sticks, assorted colors	1000	pcs
	9) Plastic Spoons (@ 100 pcs/pack)	10	packs
	10) Plastic Forks (@ 100 pcs/pack)	10	packs
	11) Plastic Cups, 12 oz., (@ 100 pcs/pack)	10	packs
	12) Plastic Chips, Ø 25mm, colors: white, blue, and red	300	pcs
	13) Spindles, plastic, colors: white, black, blue, red, & yellow	500	pcs
	14) Plastic Ruler, 12" or 300 mm capacity	20	pcs
	15) Plastic Fruits and Vegetables, (@ 10 pcs/set/type)	60	pcs
	16) Plastic Protractor, student, 180° capacity	20	pcs
III	CONSUMABLES		
	1) Art Papers (assorted colors)	5	reams
	2) Cartolina, colors: white, red, blue, green, purple, yellow	120	shts
	3) Permanent Marker, fine, black (@ 12 pcs/box)	2	boxes
	4) Transparency/Acetate, A4, for photocopier (@ 100 pcs/box)	2	boxes
	5) Stamp Pad	2	pcs
	6) Ink for Stamp Pad	5	bottles
	7) Graphing Paper	1000	shts

**PRESCRIBED MATHEMATICS INSTRUCTIONAL MATERIALS FOR PUBLIC ELEMENTARY SCHOOL PER BEC**

Item No.	Name of Instructional Material	Qty per school	Unit
	8) Manila Paper	50	sheets
	9) Whiteboard Marker, colors: blue, black, & red (@ 12 pcs/box)	15	bxs
	10) Paper Plates (@ 50 pcs/pack)	2	packs
	11) Index Cards (@ 50 pcs/pack)	3	packs
	12) Bond Paper, size: short	10	reams
	13) Rubber Bands, 50 grams/box	10	boxes
	14) Marbles, Ø 15mm (@ 100 pcs/pack)	10	packs
	15) Play Money (in bills) (@ 80 pcs/set)	20	sets
IV	MULTIMEDIA (Print)		
	1) Flash Cards, operations: Add, Subtract, Multiply, & Divide, 3 sets/operation	12	sets
	2) Window Cards, operations: Add, Subtract, Multiply, & Divide, 3 sets/opt'n	12	sets
	3) Number Chart	3	pcs
	4) Multiplication Chart	3	pcs
	5) Fraction Chart	3	pcs
	6) Place Value Chart (Decimal)	3	pcs
	7) Conversion Charts, types of measure: linear, mass, area, & volume	2	pcs/type
V	STORAGE FACILITIES		
	1) Storage Cabinet	2	units

PRESCRIBED PHYSICS INSTRUCTIONAL MATERIALS FOR PUBLIC HIGH SCHOOL PER BEC

Item No.	Item Description	Qty per School	Unit of Issue
65.4)	Friction Apparatus		
65.5)	Lever Assembly	5	set
65.6)	Pulley Set:	5	assy
	65.6.1) Double Pulley Assembly		
	65.6.2) Single Pulley Assembly	10	assy
65.7)	Spring Balances:	10	assy
	65.7.1) 10-Newton Spring Balance Assembly		
	65.7.2) 5-Newton Spring Balance Assembly	5	assy
	65.7.3) 2-Newton Spring Balance Assembly	5	assy
65.8)	Utility Spring Sclae Assembly	5	assy
65.9)	C-Clamp with hook	5	assy
65.10)	Hooked Masses:	10	pc
	65.10.1) 500-gram Hooked Mass		
	65.10.2) 250-gram Hooked Mass	5	pc
	65.10.3) 20-gram Hooked Mass	10	pc
65.11)	Case 001 (with Cover and Base Sheathing)	25	pc
65.12)	Case 002 (with Cover and Base Sheathing)	5	pc
65.13)	Case 003 (with Cover and Base Sheathing)	5	pc
65.14)	Accessories:	5	pc
	65.14.1) Modeling Clay		
	65.14.2) Dry Cell, size AA, ISO Certified	5	pc
	65.14.3) Dry Cell, size D, ISO Certified	5	pc
	65.14.4) String, thick	5	pc
	65.14.5) String, thin	5	ball
65.15)	Spare Parts:	5	ball
	65.15.1) Worm with Axle Assembly		
	65.15.2) Worm Gear A	5	assy
	65.15.3) Spur Gear B	10	pc
	65.15.4) Spur Gear C	10	pc
65.16)	User's Manual	5	pc
65.17)	Experiment Module	1	pc
		1	pc

**PRESCRIBED MATH 1 INSTRUCTIONAL MATERIALS FOR PUBLIC HIGH SCHOOL PER BEC**

Item No.	Name of Equipment/Instructional Material	Qty per School	Unit
I	EQUIPMENT:		
	1) Ruler, 30cm	50	PCS
	2) Meterstick, wooden	1	PC
	3) Tape Measure, 10 meters	10	PCS
	4) Trundle wheel, small (10cm/rev)	10	PCS
	5) Trundle wheel, big (1m/rev)	10	PCS
	6) Litre set (1/4, 1/2, 1/3, 2/3, 3/4, & 1 litre measuring cups)	10	SETS
	7) Litre set (Medicine Droppers, 1ml - 5ml)	10	SETS
	8) Utility kitchen/sprng scale, 1 kg cap.	1	PC
	9) Beam Balance, double platform, 2200-gram capacity	1	SET
	10) Spring Balance, 10-Newton	1	PC
	11) Clock Model (manipulative type)	10	PCS
	12) Sundial	1	PC
	13) Algebra Tile Set, plastic	10	SETS
	14) Model of $(x+y)^3$ , plastic cubes of 2 sizes	1	SET
	15) Protractor, semi-circular, 180°, Ø 150mm, plastic, student	50	PCS
	16) Blackboard Protractor, 360°, Ø 750mm, wooden	1	PC
	17) Simple Calculator	10	SETS
	18) Stopwatch, digital	10	SETS
	19) Scissors, 8"	50	PCS
	20) Dice, plastic	1	SET
II	GLASSWARE:		
	1) Thermometer, clinical type, 0°C - 50°C	50	PCS
	2) Hour glass	1	PC
III	CONSUMABLES:		
	1) Graphing Paper	1	REAM
	2) Manila paper	50	PCS
	3) Cartolina	50	PCS
IV	MULTIMEDIA:		
	1) DVD player with 21" TV monitor	1	SET
	2) PC complete with printer and LCD projector	1	SET
V	STORAGE FACILITIES:		
	1) Storage cabinet	1	UNIT

**PRESCRIBED MATH 2 INSTRUCTIONAL MATERIALS FOR PUBLIC HIGH SCHOOL PER BEC**

Item No.	Name of Equipment/Instructional Material	Qty per School	Unit
I	EQUIPMENT:		
	1) Binomial Expansion Model (Pascal's Triangle)	1	PC
	2) Ruler, 30cm, millimeter graduations, plastic	50	PCS
	3) Meterstick, wooden	1	PC
	4) Graphing board, 1m x 1m	1	PC
	5) Dice, plastic	25	PCS
	6) Stopwatch, digital	1	PC
	7) Scientific Calculator	10	PCS
	8) Scissors, 8"	50	PCS
II	CONSUMABLES:		
	1) Graphing Paper	1	REAM
	2) Manila paper	50	PCS
	3) Cartolina	50	PCS
III	MULTIMEDIA:		
	1) DVD player with 21" TV monitor	1	SET
	2) PC complete with printer and LCD projector	1	SET
IV	STORAGE FACILITIES:		
	1) Storage cabinet	1	UNIT

**PRESCRIBED MATH 3 INSTRUCTIONAL MATERIALS FOR PUBLIC HIGH SCHOOL PER BEC**

Item No.	Name of Equipment/Instructional Material	Qty per School	Unit
I	EQUIPMENT:		
	1) Geoboard, square, 5cm x 5cm	25	PCS
	2) Geoboard, square, 10cm x 10cm	25	PCS
	3) Geoboard, circular, Ø 5cm	25	PCS
	4) Geoboard, circular, Ø 10cm	25	PCS
	5) Geostrips w/ rubberband (6 to 20 cm, 4 bundles/set)	10	SETS
	6) Model of cutout triangle, illustration board, assorted sizes	10	SETS
	7) Model of cutout triangle, plywood, assorted sizes	1	SET
	8) Model to show the altitude of Triangle, illustration board, assorted sizes	10	SETS
	9) Model to show the altitude of Triangle, plywood, assorted sizes	1	SET
	10) Model of angle sum theorem, illustration board, assorted sizes)	10	SETS
	11) Model of angle sum theorem, plywood, assorted sizes	1	SET
	12) Geometrical model set, 3 types of prism, assorted sizes	10	SETS
	13) Geometrical model set, 3 types of pyramid, assorted sizes	10	SETS
	14) Geometrical model set, 2 types of cone, assorted sizes	10	SETS
	15) Geometrical model set, 2 types of cylinder, assorted sizes	10	SETS
	16) Geometrical model of Sphere, assorted sizes	10	SETS
	17) Surface area of Geometrical set, collapsible, 3 types of prism, assorted sizes	10	SETS
	18) Surface area of Geometrical set, collapsible, 3 types of pyramid, assorted sizes	10	SETS
	19) Surface area of Geometrical set, collapsible, 3 types of cone, assorted sizes	10	SETS
	20) Surface area of Geometrical set, collapsible, 3 types of cylinder, assorted sizes	10	SETS
	21) Surface area of Geometrical set, collapsible, Sphere, assorted sizes	10	SETS
	22) Model of Rectangular area, assorted sizes	10	SETS
	23) Model of Circular area (demonstration model), assorted sizes	1	SET
	23) Model of Rectangular solid (compose of 1cm cubes)	10	SETS
	24) Model of Pyramid in a prism (volume of pyramid), assorted sizes	1	SET
	25) Model of cone in a cylinder (volume of cone), assorted sizes	1	SET
	26) Model of sphere in a cylinder ( vol. of sphere), assorted sizes	1	SET
	27) Model of triangle illustrating $c^2 = a^2 + b^2$	25	SETS
	28) Blackboard Compass, 600mm long, wooden	1	PC
	29) Compass, student, metal	50	PCS
	30) Blackboard protractor, 360°, Ø 750mm, wooden	1	PC
	31) Protactor, semi-circular, 180°, Ø 150mm, plastic, student	50	PCS
	32) Triangular Set, assorted sizes, for student use	10	SETS
	33) Ruler, 30cm, millimeter graduations, plastic	50	PCS
	34) Meterstick, wooden	1	PC
	35) Graphing board, 1m x 1m	1	PC
	36) Dice, plastic	25	PCS
	37) Stopwatch, digital	1	PC
	38) Scientific Calculator	10	PCS
	39) Scissors, 8"	50	PCS



**PRESCRIBED MATH 3 INSTRUCTIONAL MATERIALS FOR PUBLIC HIGH SCHOOL PER BEC**

Item No.	Name of Equipment/Instructional Material	Qty per School	Unit
II	CONSUMABLES:		
	1) Graphing Paper	1	REAM
	2) Manila paper	50	PCS
	3) Cartolina	50	PCS
III	MULTIMEDIA:		
	1) DVD player with 21" TV monitor	1	SET
	2) PC complete with printer and LCD projector	1	SET
IV	STORAGE FACILITIES:		
	1) Storage cabinet	1	UNIT

**PRESCRIBED MATH 4 INSTRUCTIONAL MATERIALS FOR PUBLIC HIGH SCHOOL PER BEC**

Item No.	Name of Equipment/Instructional Material	Qty per School	Unit
I	EQUIPMENT:		
	1) Graphing Calculator, teacher use	1	PCS
	2) Graphing Calculator, student use	4	PCS
	3) Blackboard Compass, wooden, 600mm long	1	PC
	4) Compass, student, metal	50	PCS
	5) Blackboard protractor, 360°, Ø 750mm, wooden	1	PC
	6) Protractor, semi-circular, 180°, Ø 150mm, plastic, student	50	PCS
	7) Triangular Set, assorted sizes, for student use	10	SETS
	8) Ruler, 30cm, millimeter graduations, plastic	50	PCS
	9) Meterstick, wooden	1	PC
	10) Graphing board, 1m x 1m	1	PC
	11) Dice, plastic	25	PCS
	12) Stopwatch,digital	1	PC
II	CONSUMABLES:		
	1) Graphing Paper	1	REAM
III	MULTIMEDIA:		
	1) Overhead Projector	1	UNIT
	2) Projector Screen	1	UNIT
IV	STORAGE FACILITIES:		
	1) Storage Cabinet	1	UNIT

Department of Education

**PRESCRIBED SCIENCE INSTRUCTIONAL MATERIALS FOR PUBLIC ELEMENTARY SCHOOL PER BEC**

Item No.	Name of Equipment/Instructional Material	Qty per school	Unit
1	EQUIPMENT:		
	1. Air Convection Box	5	sets
	2. Anemometer, standard, analog/digital	1	set
	3. Aneroid Barometer	1	set
	4. Aquarium	1	pc
	5. Beam Balance, double platform, 2200-gram capacity	3	sets
	6. Celestial Globe	3	pcs
	7. Ordinary Globe, Ø100mm	3	pcs
	8. Relief Globe	2	pcs
	9. Simple Microscope, optical	5	units
	10. Polarizing Microscope	1	pc
	11. Compound Microscope	1	unit
	12. Connecting Wires w/crocodile clips (red, blue, black, & white)	20	pcs
	13. Dry Cell, 2 chambers	5	pcs
	14. Dynamics Carts	5	pcs
	15. Friction Blocks	5	pcs
	16. Hand Magnifying Lens, Ø100mm	5	pcs
	17. Heat Conduction Metals (different metals)	5	sets
	18. Height Scale	1	pc
	19. Inclined Plane	5	sets
	20. Iron Stand with Clamp	5	sets
	21. Lever with Axle	5	sets
	22. Liquid Convection Apparatus	5	sets
	23. Magnetic Board	5	units
	24. Magnetic Compass, medium size	5	pcs
	25. Mirror with stand	5	pcs
	26. Multimeter, mini, digital	1	pc
	27. Pair of Bar Magnets, medium size	5	pairs
	28. Pen lights, umbrella-type	5	pcs
	29. Planetarium, small classroom size	1	set
	30. Meterstick, plastic, millimeter graduations	5	pcs
	31. Prepared Slides of Algae, moss, etc.	10	specimens
	32. Protractor, semi-circular. 180°, Ø 150mm	5	pcs
	33. Pulley, double	5	sets
	34. Pulley, single	5	sets
	35. Rock Samples in compartmented box	1	set
	36. Ruler, 30 cm, plastic, millimeter graduations	5	pcs
	37. Sand Table	1	pc
	38. Slinky Coil, metal	6	pcs
	39. Specimen of Different Kinds of Soils, sterilized	5	sets
	40. Spring Balance, 10-Newton	5	pcs
	41. Steam Turbine	5	pcs
	42. Switch, tumbler	3	pcs
	43. Telescope, astronomical	1	unit
	44. Terrarium	1	pc
	45. Test Tube Holder	10	pcs

**PRESCRIBED SCIENCE INSTRUCTIONAL MATERIALS FOR PUBLIC ELEMENTARY SCHOOL PER BEC**

Item No.	Name of Equipment/Instructional Material	Qty per school	Unit
46.	Test Tube Rack	5	pcs
47.	Triangular Prism, glass	5	pcs
48.	Tuning Forks Set	1	set
49.	Water Wheel	5	pcs
50.	Weighing Scale, bathroom type	1	unit
51.	Wet Cell Kit	3	sets
52.	Wind Vane	1	set
53.	Human Circulatory System Model	1	set
54.	Human Digestive Model	1	pc
55.	Human Ear Model	1	pc
56.	Human Endocrine Model	1	pc
57.	Human Eye Model	1	pc
58.	Human Lung and Chest Model	1	pc
59.	Human Mouth and Its Parts Model	1	pc
60.	Human Muscular Model	1	pc
61.	Human Nervous System Model	1	pc
62.	Human Nose Model	1	pc
63.	Human Female Reproductive System Model	1	set
64.	Human Respiratory System Model	1	set
65.	Human Skeletal System Model	1	set
66.	Human Skin Model	1	unit
67.	Human Urinary System Model	1	set
68.	Human Tongue Model	1	pc
69.	Model of Invertebrates (insects, spiders, worms)	1	pc
70.	Model of Vertebrates (mammals, birds, reptiles, amphibians, fish)	1	pc
71.	Sun-Earth-Moon Model	3	sets
72.	Layers of the Earth Model	1	set
73.	Miniature Model of Coral Reefs	1	pc
II	GLASSWARES/PLASTIC WARES/PORCELAIN WARES:		
1.	Alcohol Thermometer -10°C - 110°C	5	pcs
2.	Beaker, 100 ml., borosilicate glass	10	pcs
3.	Clinical Thermometer	3	pcs
4.	Dropper with Aspirator, glass	1	box
5.	Funnel, Long Stem, borosilicate glass	5	pcs
6.	Graduated Cylinder, 10 ml., borosilicate glass	5	pcs
7.	Graduated Cylinder, 25 mL, borosilicate glass	5	pcs
8.	Graduated Cylinder, 100 mL, borosilicate glass	5	pcs
9.	Test Tubes, Ø 16mm x 150mm long, borosilicate glass	60	pcs
10.	Alcohol Burner, glass	5	pcs
11.	Mortar and Pestle, small	6	sets
III	CONSUMABLES:		
A.	Non-Chemicals		
1.	Flashlight Bulb, 2.5 volts, screw-type	25	pcs
2.	Flashlight Bulb Socket, screw-type	25	pcs
3.	Glass Slides	1	box

**PRESCRIBED SCIENCE INSTRUCTIONAL MATERIALS FOR PUBLIC ELEMENTARY SCHOOL PER BEC**

Item No.	Name of Equipment/Instructional Material	Qty per school	Unit
	4. Cover Slips	1	box
	5. Hand Gloves, rubber	5	pairs
	6. Safety Goggles	5	pairs
	7. Iron Filings/Bargaja Sand	1	kg
	8. Litmus Paper, Blue	1	pack
	9. Litmus Paper, Red	1	pack
	10. Magnet Wire, AWG # 22	0.5	kg
	11. Marbles, Ø 20mm, 100 pcs/pack	1	pack
	12. Modeling Clay	5	bars
	13. Washers, stainless steel	1	kg
	14. First Aid Kit (ice bag, hot water bag, plastic splint, cloth sling, gauze bondage, betadine, band-aid, alcohol, hydrogen peroxide, eye wash, blanket, absorbent cotton, and spirit of ammonia)	1	set
	<b>B. Chemicals</b>		
	1. Denatured Alcohol	1	gal
	2. Iodine Solution	1	litre
<b>IV</b>	<b>MULTIMEDIA:</b>		
	<b>A. Print:</b>		
	1. Chart of Different Weather Conditions	6	pcs
	2. Chart: Phases of the Moon	6	pcs
	3. Chart of Different Characteristics of the Planets in the Solar System	6	pcs
	4. Chart on Precautionary Measures Before and After a Storm	6	pcs
	5. Height and Weight Growth Chart	6	pcs
	6. Map of Philippine Volcanoes	6	pcs
	7. Poster of Astronomical Instruments	6	pcs
	8. Poster of Cloud Formation	6	pcs
	9. Poster of Filipino Scientists with their Contributions	6	pcs
	10. Poster on Laboratory Techniques	6	pcs
	11. Map of the Stars	6	pcs
	12. Weather Chart	6	pcs
	13. Weather Map	6	pcs
	<b>B. Audio/Video:</b>		
	1. Video on Natural Phenomenon (e.g. National Geographic , Discovery)	1	set
<b>V</b>	<b>STORAGE FACILITIES:</b>		
	1. Storage Cabinet for Chemicals and Non-chemicals Consumables	1	unit
	2. Storage Cabinet for glasswares, plastic wares, porcelain wares, and equipment	1	unit

## PRESCRIBED INTEGRATED SCIENCE INSTRUCTIONAL MATERIALS FOR PUBLIC HIGH SCHOOL PER BEC

Item No.	Item Description	Qty per School	Unit of Issue
1	Aneroid Barometer	1	unit
2	Beaker, 250 ml. capacity, borosilicate glass	5	pc
3	Erlenmeyer Flask, 250 ml. capacity, borosilicate glass	5	pc
4	Stirring Rod, Ø 6mm x 250mm long, borosilicate glass	5	pc
5	Test Tube, Ø 16mm x 150mm long, borosilicate glass	30	pc
6	Glass Tubing, Ø 6mm x Ø 4mm x 1220mm long, soda lime glass	5	lh
7	Vial, Ø 12mm x 75mm long, borosilicate glass	25	pc
8	Graduated Cylinder, 10 ml. capacity, borosilicate glass	5	pc
9	Graduated Cylinder, 25 ml. capacity, borosilicate glass	5	pc
10	Hand Lens, at least 5x magnification	5	pc
11	Rain Gauge	1	unit
12	Protractor, plastic, 180°, semi-circular, Ø 150mm	5	pc
13	Stopwatch, digital	5	pc
14	Balance, Triple-Beam, Capacity: 610 grams	5	unit
15	Terrestrial Globe, Ø 12 inches	1	unit
16	Bulb, flashlight size, 2.5 V, screw-type, ISO Certified	20	pc
17	Bulb Socket, flashlight size, screw-type, ISO Certified	20	pc
18	Cardboard, 26" x 36"	10	sht
19	Cartolina, white	10	sht
20	Clay, any color, in bars	10	bar
21	Plastic Cup, transparent, 12 oz., 50's/pack	1	pack
22	Illustration Board, 15" x 20"	10	sht
23	Manila Paper	5	sht
24	Rubber Band, small	2	box
25	Scissors, plastic handle, big	5	pair
26	String, any color	1	roll
27	Styropore Balls:		
	27.1) Ø 1" Styropore Ball	20	pc
	27.2) Ø 2" Styropore Ball	10	pc
	27.3) Ø 4" Styropore Ball	5	pc
28	Penlight, 3 V, plastic case	5	pc
29	Rubber Stopper # 1, with 2 holes	5	pc
30	Rubber Stopper # 1, without holes	5	pc
31	Rubber Stopper # 1, with 1 hole	5	pc
32	Map of World Climates, 87" x 53", tarpauline	1	unit
33	Map of Philippine Climates, 22" x 35", tarpauline	1	unit
34	Map of Philippine Volcanoes, 22" x 35", tarpauline	1	unit
35	Map of Stars, 36" x 36", tarpauline	1	unit
36	Poster: Layers of the Earth, 22" x 14", tarpauline	1	unit
37	Poster: The Richter Magnitude Scale, 22" x 14", tarpauline	1	unit
38	Glass Funnel, Ø 75mm, borosilicate glass	5	pc
39	Seismograph Model	1	unit
40	Anemometer with Wind Vane	1	unit

**PRESCRIBED INTEGRATED SCIENCE INSTRUCTIONAL MATERIALS FOR PUBLIC HIGH SCHOOL PER BEC**

Item No.	Item Description	Qty per School	Unit of Issue
41	Magnetic Compass	5	pc
42	AWG # 22 Wire, red, 250mm long with alligator clips at ends	6	lh
43	AWG # 22 Wire, black, 250mm long with alligator clips at ends	6	lh
44	AWG # 22 Wire, red, 500mm long with alligator clips at ends	6	lh
45	AWG # 22 Wire, black, 500mm long with alligator clips at ends	6	lh
46	Bar Magnet, 6" x 3/4" x 1/4"	5	pc
47	U-shaped Magnet, 3" L x 3" W x 3/4" thick	5	pc
48	Alcohol Burner, glass, 120 ml. capacity	5	pc
49	Petri Dish, Ø 100mm, glass	5	pc
50	Watch Glass, Ø 100mm	5	pc
51	Reagent Bottle, 250 ml. capacity, glass, Capacity: 250 ml.	5	pc
52	Medicine Dropper, 2 ml. capacity, glass tube length = 76 mm	30	pc
53	Mortar and Pestle, 300 ml. capacity, porcelain	5	set
54	Thermos Bottle, 2 liters capacity	1	unit
55	Syringe, 10 ml. capacity, glass	5	pc
56	Glass Tubes, Hematocrite, 100's/pack	1	pack
57	Glass Tube, 3mm OD x 1200mm long	5	lh
58	Glass Tube, 6mm OD x 1200mm long	5	lh
59	Graduated Cup, 200 ml. capacity, plastic, transparent	5	pc
60	Meterstick, plastic	5	pc
61	Ring and Ball Apparatus	5	unit
62	Glass Rod, solid, Ø 1/2" x 12" long	5	pc
63	Plastic Rod, solid, Ø 1/2" x 12" long	5	pc
64	Wooden Rod, solid, Ø 1/2" x 12" long	5	pc
65	Copper Rod, solid, Ø 1/2" x 12" long	5	pc
66	Aluminum Rod, solid, Ø 1/2" x 12" long	5	pc
67	Steel Rod, solid, Ø 1/2" x 12" long	5	pc
68	Sun-Earth-Moon Model	1	unit
69	Solar System Model	1	unit
70	Constellation	1	unit
71	Hydrometer, Specific Gravity: 0.700 - 2.000, length= 15", glass	5	pc
72	Rock Samples with compartmented storage/display box	1	pc
73	Telescope, astronomical, complete with tripod	1	unit
74	Bunsen Burner, gas-type	1	unit
75	Tweezer, 6 1/2" long, stainless steel	5	pc
76	Alcohol Thermometer, -20°C to 110°C	10	pc

**PRESCRIBED BIOLOGY INSTRUCTIONAL MATERIALS FOR PUBLIC HIGH SCHOOL PER BEC**

Item No.	Item Description	Qty per School	Unit of Issue
1	Microscope, Compound	20	unit
2	Dissecting Set	5	set
3	Model, Human Torso, life-size	1	unit
4	Model, Human Skeleton, life-size	1	unit
5	Model, Animal Mitosis, 24" W x 18" H	1	unit
6	Model, Animal Meiosis, 24" W x 18" H	1	unit
7	Test Tube, Ø 16mm x 150mm long, borosilicate glass	30	pc
8	Evaporating Dish, 75 ml. capacity, porcelain	10	pc
9	Mortar and Pestle, 300 ml. capacity, porcelain	5	set
10	Petri Dish, Ø 100mm, glass	10	pc
11	Beaker, 250 ml., borosilicate glass	10	pc
12	Alcohol Thermometer, -20°C to 110°C	10	pc
13	Balance, Triple-Beam, Capacity: 610 grams	5	unit
14	Cork Borers, 4.8mm to 16.7mm OD, 6's/set	1	set
15	Tripod, Height = 6"	5	pc
16	Cork Stopper for Ø 20mm test tube	20	pc
17	Rubber Stopper for Ø 20mm test tube	20	pc
18	Rubber Stopper # 1 without holes	5	pc
19	Filter Paper, 12.5cm, 100's/pack	1	box
20	Litmus Paper Strips, blue	1	vial
21	Litmus Paper Strips, red	1	vial
22	Drinking Straws, any color, 100's/pack	1	pack
23	Hand Gloves, acid-resistant, rubber	5	pair
24	Modelling Clay, any color, 1cm x 4cm x 20cm	20	bar
25	Ruler, steel, 30cm	5	pc
26	Syringe, plastic, 30 ml.	5	pc
27	Glass Slides	5	box
28	Glass Cover Slips	5	box
29	Wash Bottle, glass	10	pc
30	Baking Soda (NaHCO <sub>3</sub> )	1	kg
31	Lye (NaOH), powder	500	gram
32	Gentian Violet	500	ml
33	Iodine Solution	500	ml
34	Bromthymol blue	300	ml
35	Oil, vegetable	500	ml
36	Yeast, powder	500	gram
37	Plant Cell Chart, tarpauline, 660mm x 500mm	1	pc
38	Animal Cell Chart, tarpauline, 660mm x 500mm	1	pc
39	Development of an Embryo Chart, tarpauline, 660 x 500mm	1	pc
40	Mendel's Law Charts:		
	40.1) Monohybrid Cross Chart, tarpauline, 660 x 500mm	1	pc
	40.2) Dihybrid Cross Chart, tarpauline, 660mm x 500mm	1	pc
41	Gene Map of the Human Chromosome, tarpauline, 660 x 500mm	1	pc



**PRESCRIBED BIOLOGY INSTRUCTIONAL MATERIALS FOR PUBLIC HIGH SCHOOL PER BEC**

Item No.	Item Description	Qty per School	Unit of Issue
42	Food Pyramid Chart, tarpauline, 660mm x 500mm	1	pc
43	Flowers and Seed Structure Chart, tarpauline, 660 x 500mm	1	pc
44	Graduated Cylinder, 100 ml., borosilicate glass	10	pc
45	Erlenmeyer Flask, 250 ml., borosilicate glass	10	pc
46	Stirring Rod, Ø 6mm x 250mm long, borosilicate glass	5	pc
47	Hand Lens, at least 5x magnification	5	pc
48	Alcohol Burner, glass, 120 ml. capacity	5	pc
49	Graduated Cylinder, 10 ml., borosilicate glass	10	pc
50	Watch Glass, Ø 100mm	10	pc
51	Medicine Dropper, 2 ml. capacity, glass tube length = 76 mm	15	pc
52	Glass Funnel, Ø 75mm, borosilicate glass	5	pc
53	Safety Glasses/Goggles	5	pair

## PRESCRIBED CHEMISTRY INSTRUCTIONAL MATERIALS FOR PUBLIC HIGH SCHOOL PER BEC

Item No.	Item Description	Qty per School	Unit of Issue
1	Alcohol Thermometer, -20°C to 110°C		
2	Test Tube, Ø12mm x 75mm long, borosilicate glass	5	pc
3	Test Tube, Ø13mm x 100mm long, borosilicate glass	25	pc
4	Wire Gauze, stainless steel wire mesh, Ø 90mm ceramic center	10	pc
5	Stirring Rod, Ø 6mm x 250mm long, borosilicate glass	5	pc
6	Beaker, 250 ml., borosilicate glass	5	pc
7	Beaker, 500 ml., borosilicate glass	20	pc
8	Evaporating Dish, 75 ml. capacity, porcelain	5	pc
9	Electrolysis Apparatus, Hoffman-type	5	pc
10	Cork Stoppers	5	set
11	Cork Borers, 4.8mm to 16.7mm OD, 6's/set	5	pc
12	Reagent Bottle, narrow mouth amber color (250 ml. cap.), glass	1	set
13	Reagent Bottle, narrow mouth colorless (250 ml. cap.), glass	5	pc
14	Reagent Bottle, wide mouth colorless (250 ml. cap.), glass	5	pc
15	Erlenmeyer Flask, 250 ml., borosilicate glass	5	pc
16	Balance, Triple-Beam, Capacity: 610 grams	5	pc
17	Alcohol Burner, glass, 120 ml. capacity	5	unit
18	Florence Flask, 250 ml., borosilicate glass	5	pc
19	Spatula, ceramic with good chemical resistance, length = 7.25"	5	pc
20	Calorimeter	5	set
21	Glass Funnel, Ø 75mm, borosilicate glass	5	unit
22	Volumetric Flask, 250 ml., borosilicate glass	5	pc
23	Rubber Tube, Ø 6mm x Ø 4mm x 5000mm long	1	pc
24	Glass Tubing, Ø 6mm x Ø 4mm x 1220mm long, soda lime glass	2	lh
25	Burette, 10 ml. capacity, borosilicate glass	1	lh
26	Syringe, 5 ml. capacity, plastic	1	pc
27	Pipette, 10 ml. capacity, glass	5	pc
28	Vial, Ø 6mm x 50mm long, borosilicate glass, 100's/pack	1	pc
29	Deflagrating Spoon, stainless steel	1	pack
30	Bunsen Burner, gas-type	5	pc
31	LPG tank with gas, 11 kg. capacity	5	unit
32	Test Tube Brush, over-all length = 12"	1	unit
33	Osmosis Apparatus	5	pc
34	Conductivity Apparatus	1	unit
35	Condenser, Liebig-type	1	unit
36	pH Meter, range: 0 to 14 pH, 9-volt battery operated	1	set
37	pH Strips on Vinyl, 1.0 - 14 pH/1.0 pH, 3 color spot, 50's/pack	1	unit
38	Filter Paper, 12.5cm, 100's/box	1	pack
39	Safety Glasses/Goggles	1	box
40	Acetone	10	pair
41	Activated Carbon	1	liter
42	Spirit of Ammonia	500	gram
43	Water Ammonia	500	ml
		500	ml

**PRESCRIBED CHEMISTRY INSTRUCTIONAL MATERIALS FOR PUBLIC HIGH SCHOOL PER BEC**

Item No.	Item Description	Qty per School	Unit of Issue
44	Boric Acid	500	gram
45	Calcium Chloride	500	gram
46	CuSO <sub>4</sub>	500	gram
47	H <sub>2</sub> O <sub>2</sub>	500	ml
48	HCl	1	liter
49	KMnO <sub>4</sub>	500	gram
50	MgO	500	gram
51	Lye (NaOH)	500	gram
52	Magnesium Ribbon, minimum of 1 meter/roll	3	rolls
53	Oil, Engine, SAE 30 or 40	500	ml
54	Potassium Iodide	500	gram
55	Sulfur Powder	500	gram
56	Zinc Chloride	500	gram
57	Zinc Pellets	500	gram
58	Chart on Periodic Table of Elements, tarpauline, 900 x 1800mm	1	pc
59	Poster on Laboratory Safety Rules, tarpauline, 750 x 1000mm	1	pc
60	Poster on Basic Laboratory Apparati, tarpauline, 750 x 1000mm	1	pc
61	Cabinet for corrosive materials, stainless steel	1	unit
62	Penlight, 3 V, plastic case	10	pc
63	Hand Gloves, acid-resistant, rubber	10	pair
64	NSTIC-developed Basic Science Equipment:		
	64.1) Stand Base Assembly	10	assy
	64.2) Stand Support	20	pc
	64.3) Ring with stem	5	pc
	64.4) Ø9.5mm x 250mm long Stand Rod	10	pc
	64.5) Ø9.5mm x 500mm long Stand Rod	20	pc
	64.6) Ø12.7mm x 1000mm long Stand Rod	5	pc
	64.7) Multiclamp Assembly	25	assy
	64.8) Universal Bosshead Assembly	10	assy
	64.9) Universal Clamp Assembly	12	assy
	64.10) Test Tube Holder	5	pc
	64.11) Test Tube Tack	6	pc
	64.12) Case 001 (with Cover and Base Sheathing)	1	pc
	64.13) Case 002 (with Cover and Base Sheathing)	1	pc
	64.14) Case 003 (with Cover and Base Sheathing)	1	pc
	64.15) User's Manual	1	pc

## PRESCRIBED PHYSICS INSTRUCTIONAL MATERIALS FOR PUBLIC HIGH SCHOOL PER BEC

Item No.	Item Description	Qty per School	Unit of Issue
1	Archimedes Principle Apparatus, 100 ml. capacity	1	set
2	Open U-tube Manometer, soda lime glass, mounted on a wooden board/stand	1	unit
3	Air Blower, 2-speed setting, 500-1000 watts, 220 volts AC	1	unit
4	Miniature Light Bulb, 1.35 V, 0.06 A, 3 pcs/set, ISO Certified	5	set
5	Miniature Light Bulb Base (Socket), 3 pcs/set, ISO Certified	5	set
6	Dry Cell Holder, for single size D dry cell, 4 pcs/set	5	set
7	Set of Connectors:		
	7.1) AWG # 22, black, 300mm long with alligator clips at ends	15	pc
	7.1) AWG # 22, red, 300mm long with alligator clips at ends	15	pc
	7.1) AWG # 22, white, 300mm long with alligator clips at ends	10	pc
	7.1) AWG # 22, yellow, 300mm long with alligator clips at ends	10	pc
8	Resistance Box	5	set
9	Introduction to Radioactivity Kit, Lab-Aids	1	set
10	Switches, knife-type	5	unit
11	DC Ammeter	5	unit
12	DC Voltmeter	5	unit
13	Galvanometer	5	unit
14	Set of Coils	5	set
15	Motor-Generator Model Experiment Set	5	set
16	Set of Tools		
	16.1) Screwdriver, flat, 6"	1	pc
	16.2) Screwdriver, phillips, 6"	1	pc
	16.3) Long Nose Pliers, 6"	1	pc
	16.4) Mechanical Pliers, 6"	1	pc
	16.5) Soldering Iron, 30 watts	1	pc
	16.6) Ball Peen Hammer, handle length=11"	1	pc
	16.7) Precision Screwdrivers Set, 6 pcs, with plastic casing	1	set
	16.8) Tweezers, stainless steel, with curved tips, 6 1/2" long	1	pc
	16.9) Diagonal Cutter, 6"	1	pc
17	Advanced Electromagnetism Kit	5	kit
18	Graphing Calculator Set:		
	18.1) Projectable Graphing Calculator	1	unit
	18.2) Non-projectable Graphing Calculator	5	unit
19	Basic Electronics Kit	5	kit
20	Fuse with Holder	5	pc
21	Variable Power Supply	5	unit
22	Tuning Fork Set (set of 8 tuning forks)	1	set
23	Resonance Tube Set, open-ended	5	set
24	Sound Signal Generator Kit	5	kit
25	Loudspeaker, 2" - 3" $\varnothing$ , $\geq 1$ watt, woofer type, 4 - 8 Ohms	5	unit
26	Wave Demonstration Set:		
	26.1) Slinky Coil, metal, $\varnothing 3$ " x 4" long	5	pc
	26.2) Helical Spring, steel, $\varnothing 3/4$ " x 72" long	5	pc

**PRESCRIBED PHYSICS INSTRUCTIONAL MATERIALS FOR PUBLIC HIGH SCHOOL PER BEC**

Item No.	Item Description	Qty per School	Unit of Issue
27	DC String Vibrator with String	5	set
28	Musical Instrument (Ukelele, small size)	1	unit
29	Basic Lens Set (set of 6 lenses)	5	set
30	Mirror Set (set of 3 mirrors)	5	set
31	Prism , right-angle, acrylic, 28 x 38 x 75mm	5	pc
32	Refraction Blocks (1 set is composed of 1 pc Glass & 1 pc Acrylic)	5	set
33	Refraction Tank	5	unit
34	Student Optical Bench Set with Meterstick	5	set
35	Multimeter	5	unit
36	Protractor, 360° transparent plastic, Ø 120mm	5	pc
37	Beaker, 500 ml., borosilicate glass	5	pc
38	Florence Flask, 250 ml., borosilicate glass	5	pc
39	Chart on Electromagnetic Spectrum, 750 x 1000mm, tarpauline	1	pc
40	Chart on Radioactive Elements, 1000mm x 1500mm, tarpauline	1	pc
41	Acetate, A4, ordinary, 100's/box	1	box
42	Pingpong Ball	10	pc
44	Balloon, rubber, large size	10	pc
45	Modelling Clay, standard	5	bar
46	Party Cups, 12 oz., transparent, 50's/pack	1	pack
47	Cutter, office-type	5	pc
48	Dry Cell, 1.5 V, size D, ISO Certified	15	pc
49	Dry Cell, 1.5 V, size AA, ISO Certified	5	pc
50	Dry Cell, 9 V, ISO Certified	5	pc
51	Illustration Board, 15" x 20"	5	shf
52	Manila Paper, standard size	10	shf
53	Spoon, plastic, 100's/pack	1	pack
54	Tray, plastic, 30cm x 50cm	1	pc
55	Pins, utility, 100's/box	1	box
56	Rubber Band, small, 50 grams/box	1	box
57	Scissors, 8"	5	pair
58	Drinking Straws, single color, 100's/pack	1	pack
59	Sticky Tape, small size	5	roll
60	String, medium size	1	ball
61	Styropore Balls:		
	61.1) Ø 1" Styropore Ball	20	pc
	61.2) Ø 2" Styropore Ball	10	pc
	61.3) Ø 4" Styropore Ball	5	pc
62	Tag Board, standard	5	pc
63	Logic Gates Trainer Kit	5	unit
64	NSTIC-developed Thermocline Apparatus	5	pc
65	NSTIC-developed Mechanics Science Equipment		
	65.1) Cart-Rail System (includes Dynamic Carts, Motorized Cart, Rails, etc.)	5	set
	65.2) Free-Fall Apparatus (includes Solenoid, Pad Switch, Synchro Box, Timer, etc.)	5	set
	65.3) Hooke's Law Apparatus	5	set