

**Mass Production, Supply, and Delivery of Science and Mathematics Equipment Packages to Public Elementary Schools for Grades 1 to 3 and Grades 4 to 6, Public Junior High Schools for Grades 7 to 10, and Public Senior High Schools for Grades 11 to 12 (Core & STEM) 2022 and 2023 Rebid**

**(for Lots 2,3,4,5,9,10,11,12,13 &19)**

**ANNEX "E"**

## WARRANTY PERIOD

**a. 2022 Rebid**

Lot No.	Item No.	Description	Warranty Period
<b>I. MASS PRODUCTION ITEMS</b>			
<b>II. SCIENCE AND MATHEMATICS EQUIPMENT (MARKET ITEMS)</b>			
<b>2A,B and C</b>	<b>CHEMICALS</b>		
	1	Benedict's Solution, 100 mL/bottle	As per stated in the technical specifications
	2	Boric Acid, 100 grams/bottle	As per stated in the technical specifications
	3	Bromothymol Blue	As per stated in the technical specifications
	4	Calcium Chloride, 100 grams / bottle	As per stated in the technical specifications
	5	Copper Sulfate, CuSO <sub>4</sub> , 100 grams/bottle	As per stated in the technical specifications
	6	Gentian Violet, 100 ml / bottle	As per stated in the technical specifications
	7	Iodine Solution, 100 ml / bottle	As per stated in the technical specifications
	8	Magnesium Ribbon, 25 grams, 1 roll	As per stated in the technical specifications
	9	Manganese Dioxide, 50 grams / bottle	As per stated in the technical specifications
	10	Microscope's Immersion Oil, 100mL/bot	As per stated in the technical specifications
	11	Phenolphthalein, 100 grams/bottle	As per stated in the technical specifications
	12	Potassium Chloride, 100 grams / bottle	As per stated in the technical specifications
	13	Potassium Iodide, 100 grams / bottle	As per stated in the technical specifications
	14	Sodium Hydroxide (Lye), 250 grams/bottle	As per stated in the technical specifications
	15	Yeast, active dry, 100 grams / bottle	As per stated in the technical specifications
	16	Zinc Chloride, 100 grams / bottle	As per stated in the technical specifications
17	Zinc metal, pellets/mossy, 100 grams / bottle	As per stated in the technical specifications	
<b>3A,B and C</b>	<b>GLASSWARES AND LAB TOOLS</b>		
	1	Beaker, borosilicate, 250 mL	None
	2	Beaker, borosilicate, 50 mL	None
	3	Burette, 10 mL capacity (acid)	None
	4	Burette, 10 mL capacity (base)	None
	5	Burner, Alcohol, glass, 150 mL Capacity	None
	6	Burner, Bunsen	1 year
	7	Cork Stopper # 5 (for Ø 16mm test tube)	None
	8	Crucible with lid/cover	None
	9	Dish, Evaporating, 75 mL	None
	10	Distillation set-up: Condenser, Liebig-type	None
	11	Distillation set-up: Distilling Flask, borosilicate, 250ml,	None
	12	Double burette clamp/holder	None
13	Electrolysis Apparatus, student-type (Brownlee)	None	
18	Flask, Erlenmeyer, borosilicate, narrow-mouth, 250 mL	None	
19	Funnel, borosilicate, fluted	None	
20	Glass Tubing, Ø 6 mm x Ø 4 mm x 1500 mm long	None	

	21	Manometer, Open U-tube	None
	22	Mortar and Pestle, porcelain, 150 mL.	None
	23	Osmosis Apparatus	None
	24	Pipette, Beral, 1 mL	None
	25	Reagent Bottle, narrow-mouth, amber, borosilicate, 250 mL	None
	26	Reagent Bottle, wide-mouth, transparent, borosilicate, 250 mL	None
	27	Rubber Stopper # 0 (for Ø 16mm test tube)	None
	28	Spatula, spoon, porcelain and glazed	None
	29	Stirring Rod, Ø 6 mm x 250 mm long	None
	30	Test Tube, borosilicate, Ø 16 mm x 150 mm long	None
	31	Test tube brush	None
	32	Tong, Beaker	None
	<b>SCIENCE DEVICES, INSTRUMENTS, AND MEASURING TOOLS - EARTH &amp; SPACE and LIVING THINGS</b>		
<b>4A, B and C</b>	1	Balance, Toploading, Electronic	1 year
	2	Centrifuge	1 year
	3	Electrical Conductivity (Conductivity of Solutions) Apparatus	1 year
	4	Laboratory Hot Plate with magnetic stirrer	1 year
	5	Microscope, Digital	1 year
	6	Soil pH, Moisture, Sunlight Meter	1 year
	7	Telescope, Astronomical (Reflecting)	1 year
	<b>MATHEMATICAL MANIPULATIVES</b>		
<b>5A, B and C</b>	1	Algebra Tile Set, plastic	None
	2	Base Ten Blocks	None
	3	Beads, Ø16mm	None
	4	Circle Area Demonstrator	None
	5	Compass, Drawing, student type	None
	6	Cuisenaire Rods, 250 pcs/set	None
	7	Elapsed Time (Clock) Set	None
	8	Geoboard, 11 x 11	None
	9	Geoboard, 5 x 5	None
	10	Geostrips	None
	11	Ghost Grid Whiteboard, Mobile Magnetic, 72-inch x 40-inch	1 year
	12	Linking Cubes	None
	13	Model, Basic 3D Geometrical Collapsible	None
	14	Model, Basic 3D Geometrical Solids	1 year
	15	Pattern Blocks, 250 pcs/set	None
	16	Pentominoes	None
	17	Plastic Two-colored Counters, 1-inch diameter, 200 pcs/set	None
	18	Probability Kit	None
	19	Tangrams, set of 30	None

**b. 2023 Rebid**

Lot No.	Item No.	Description	Warranty Period
<b>II. SCIENCE AND MATHEMATICS EQUIPMENT (MARKET ITEMS)</b>			
9	<b>CHEMICALS</b>		
	1	Benedict's Solution, 100 mL/bottle	As per stated in the technical specifications
	2	Boric Acid, 100 grams/bottle	As per stated in the technical specifications
	3	Bromothymol Blue	As per stated in the technical specifications
	4	Calcium Chloride, 100 grams / bottle	As per stated in the technical specifications
	5	Copper Sulfate, CuSO <sub>4</sub> , 100 grams/bottle	As per stated in the technical specifications
	6	Gentian Violet, 100 ml / bottle	As per stated in the technical specifications
	7	Iodine Solution, 100 ml / bottle	As per stated in the technical specifications
	8	Magnesium Ribbon, 25 grams, 1 roll	As per stated in the technical specifications
	9	Manganese Dioxide, 50 grams / bottle	As per stated in the technical specifications
	10	Microscope's Immersion Oil, 100mL/bot	As per stated in the technical specifications
	11	Phenolphthalein, 100 grams/bottle	As per stated in the technical specifications
	12	Potassium Chloride, 100 grams / bottle	As per stated in the technical specifications
	13	Potassium Iodide, 100 grams / bottle	As per stated in the technical specifications
	14	Sodium Hydroxide (Lye), 250 grams/bottle	As per stated in the technical specifications
	15	Yeast, active dry, 100 grams / bottle	As per stated in the technical specifications
	16	Zinc Chloride, 100 grams / bottle	As per stated in the technical specifications
17	Zinc metal, pellets/mossy, 100 grams / bottle	As per stated in the technical specifications	
10	<b>GLASSWARES AND LAB TOOLS</b>		
	1	Beaker, borosilicate, 250 mL	None
	2	Beaker, borosilicate, 50 mL	None
	3	Burette, 10 mL capacity (acid)	None
	4	Burette, 10 mL capacity (base)	None
	5	Burner, Alcohol, glass, 150 mL Capacity	None
	6	Burner, Bunsen	None
	7	Cork Stopper # 5 (for Ø 16mm test tube)	None
	8	Crucible with lid/cover	None
	9	Dish, Evaporating, 75 mL	None
	10	Distillation set-up: Condenser, Liebig-type	None
	11	Distillation set-up: Distilling Flask, borosilicate, 250ml,	None
	12	Double burette clamp/holder	None
13	Electrolysis Apparatus, student-type (Brownlee)	None	

	14	Flask, Erlenmeyer, borosilicate, narrow-mouth, 250 mL	None
	15	Funnel, borosilicate, fluted	None
	16	Glass Tubing, Ø 6 mm x Ø 4 mm x 1500 mm long	None
	17	Manometer, Open U-tube	None
	18	Mortar and Pestle, porcelain, 150 mL.	None
	19	Osmosis Apparatus	None
	20	Reagent Bottle, narrow-mouth, amber, borosilicate, 250 mL	None
	21	Reagent Bottle, wide-mouth, transparent, borosilicate, 250 mL	None
	22	Rubber Stopper # 0 (for Ø 16mm test tube)	None
	23	Spatula, spoon, porcelain and glazed	None
	24	Stirring Rod, Ø 6 mm x 250 mm long	None
	25	Test tube brush	None
	26	Test Tube, borosilicate, Ø 16 mm x 150 mm long	None
	27	Tong, Crucible	None
	28	Vial, screw-neck, 25 mL. (with screw-type plastic cap)	None
	29	Vial, screw-neck, 50 mL. (with screw-type plastic cap)	None
	30	Watch Glass, Ø 90 mm	None
	<b>SCIENCE DEVICES, INSTRUMENTS AND MEASURING TOOLS MATTER (MI-LOT 11)</b>		
11	1	Balance, Toploading, Electronic	1 year
	2	Balance, Triple Beam, with tare, 2610-gram	1 year
	3	Calorimeter	1 year
	4	Centrifuge	1 year
	5	Electrical Conductivity (Conductivity of Solutions) Apparatus	1 year
	6	Filter Paper, crepe, 580mm x 580 mm sheet, Grade 0905	None
	7	Gloves, Hand, super nitrile	None
	8	Graduated Cylinder, borosilicate, 10 mL	None
	9	Graduated Cylinder, borosilicate, 100 mL	None
	10	Graduated pipette with rubber pipettor, borosilicate, 10 mL	None
	11	Hydrometer for heavy liquids	None
	12	Hydrometer for light liquids	None
	13	Laboratory Hot Plate with magnetic stirrer	1 year
	14	Safety Goggles, polycarbonate	None
	15	Thermometer, Laboratory type, Alcohol, -20°C to 110°C	None
	<b>SCIENCE DEVICES, INSTRUMENTS, AND MEASURING TOOLS – EARTH &amp; SPACE AND LIVING THINGS (MI-LOT 12)</b>		
12	1	Anemometer with Wind Vane, Cup type	1 year
	2	Anemometer, Simple	1 year

	3	Aneroid Barometer Set (Demonstration Type)	1 year
	4	Aneroid Barometer, wall-mount	1 year
	5	Compass, Magnetic	None
	6	Dissecting Set with pan	None
	7	First Aid Kit	None
	8	Gloves, Surgical	None
	9	Hand Lens, 10x magnification	None
	10	Hand Lens, 5x magnification	None
	11	Hexagonal Weigh Dishes Set, 50mL, 500 pcs/pack	None
	12	Lens Paper, 50's/pack	None
	13	Microscope, Compound with 4 Objectives	1 year
	14	Microscope, Digital	1 year
	15	Pipette, Beral, 1 mL	None
	16	Prepared Slide Set, Microscope, 25 pieces	None
	17	Prepared Slide Set, Mitosis and Meiosis	None
	18	Reaction Plates with 6 Wells	None
	19	Sedimentator Tube	1 year
	20	Sling Psychrometer	1 year
	21	Soil pH, Moisture, Sunlight Meter	1 year
	22	Soil/Test Sieve*	None
	23	Thermometer, Classroom, wall-mount	None
	24	Tong, Beaker	None
	25	Wash Bottle, plastic, 250 mL	None
	<b>MATHEMATICAL MANIPULATIVES (MI-LOT 13)</b>		
<b>13</b>	1	Algebra Tile Set, plastic	None
	2	Base Ten Blocks	None
	3	Beads, Ø16mm	None
	4	Circle Area Demonstrator	None
	5	Compass, Drawing, student type	None
	6	Cuisenaire Rods, 250 pcs/set	None
	7	Elapsed Time (Clock) Set	None
	8	Geoboard, 11 x 11	None
	9	Geoboard, 5 x 5	None
	10	Geostrips	None
	11	Ghost Grid Whiteboard, Mobile Magnetic, 72-inch x 40-inch	1 year
	12	Linking Cubes	None

	13	Model, Basic 3D Geometrical Collapsible	None
	14	Model, Basic 3D Geometrical Solids	1 year
	15	Pattern Blocks, 250 pcs/set	None
	16	Pentominoes	None
	17	Plastic Two-colored Counters, 1-inch diameter, 200 pcs/set	None
	18	Probability Kit	None
	19	Tangrams, set of 30	None
	<b>FORCE, MOTION AND ENERGY KITS (MI-LOT 19)</b>		
19	1	Advanced Electromagnetism Kit	1 year
	2	Air Blower	1 year
	3	Archimedes Principle Set	1 year
	4	Basic Electronics Kit	1 year
	5	Basic Lens Set, acrylic	None
	6	Coefficient of Linear Expansion	1 year
	7	Connector, Black (# 18 copper, AWG stranded) with alligator clip on one end and banana plug on the other end	None
	8	Connector, Red (# 18 copper, AWG stranded) with alligator clip on one end and banana plug on the other end	None
	9	Connector, Yellow (# 18 copper, AWG stranded) with alligator clip on one end and banana plug on the other end	None
	10	DC Ammeter	1 year
	11	DC String Vibrator, string included	None
	12	DC Voltmeter	1 year
	13	Diffraction slits & Diffraction grating Set	None
	14	Digital Geiger-Muller Counter with radioisotopes samples	1 year
	15	Dry Cell Holder (size D)	None
	16	Dry Cell, 1.5 volts, size D	None
	17	Engine Model (Internal Combustion)	1 year
	18	Flask, Florence, glass, 500 mL	None
	19	Force Table	1 year
	20	Fuse Holder w/ Fuse	None
	21	Galvanometer	1 year
	22	Helical Spring	None
	23	Iron Core Rod (non-corrugated)	None
	24	Laser Light	None
	25	Long Nose Pliers, 6-inch, 1 pair/set	None
	26	Magnet Wire	None

27	Manometer, Open U-tube with Nakamura-type Water Pressure Apparatus	1 year
28	Miniature Light Bulb	None
29	Miniature Light Bulb Holder	None
30	Mirror Set, acrylic	None
31	Motor-Generator Model Experiment Set	1 year
32	Multimeter, digital	1 year
33	Optical Bench Set	None
34	Pair of Bar Magnets	None
35	Prism Set	None
36	Resistance Board	None
37	Ring and Ball Apparatus	None
38	Ripple Tank Set	1 year
39	Slinky Coil, metal	None
40	Sound Resonance Set: Loud Speaker	1 year
41	Sound Resonance Set: Resonance Tube, close-ended	1 year
42	Sound Resonance Set: Tone Generator	1 year
43	Strobe Light	1 year
44	Switch, Knife type, Single Pole Single Throw	None
45	Ticker Timer Set	1 year
46	Toy Car, non-friction, non-battery	None
47	Tuning Fork Set	None
48	Vacuum Tube and Manual Vacuum Pump	1 year