General Specifications

Item	Description	STATEMENT OF COMPLIANCE (State Comply or Not Comply)	REMARKS
1	All equipment and components must be of the required level of technology, new, compliant with the requested specifications, responding to current quality standards in international markets, manufactured by reputable and consolidated international brands, reliable and fully adequate for the intended purpose.		
2	All equipment markings, user manuals and electronic copies must be in English.		
3	All equipment shall conform and operate on the standard electric supply in the Philippines (220Vac, 50/60 Hz power, type A & B power sockets)		
4	All equipment must be able to operate in the environmental conditions of the different locations in The Philippines, especially considering humid environments at temperatures ranging from 8°C to 45°C, dusty and moisty environments and frequently salty air.		
5	All connections between components shall be ready to operate, once installation is finalized.		
6	All necessary cables, adaptors and connections must be included and clearly marked, in order to facilitate rapid and accurate assembly.		
7	Bidder should execute an Undertaking that the spare parts are available nationwide for a minimum period of five (5) years and that the original brand of the spare parts are made available to DepEd.		
8	Imported products should pass international quality control product standards and have international quality control product markings such as CE, ISO, ASTM, ASQC, AFCIQ, ASQ, DGQ, EOQC, IQA, and the likes, while locally made products (Philippine-made) should pass the local quality control product standards and bear the PS mark.		
9	The items must be branded and permanently marked on the items, good quality, must be free from toxic materials, and must be properly packed		
10	The equipment and tools can be utilized by male and female learners.		

Detailed Specification

Item	Description	Technical Specifications	STATEMENT OF COMPLIANCE (State Comply or Not Comply)	BIDDER'S ACTUAL OFFER
MARKET ITEMS				
LOT 2: CHEMICALS (MI-LOT 2)				
1	**Benedict's Solution, 100ml/bottle**	Functional Specifications: Used to test for levels/ traces of simple reducing sugars		
2	**Boric Acid, 100 grams / bottle**	Functional Specifications: Used as a substrate in Flame test to visually identify boron or its specific unknown metalloid ion based on the characteristic color it emits on the Bunsen flame.		
3	**Bromothymol Blue**	Functional Specifications: Used as an indicator of dissolved Carbon dioxide.		
4	**Calcium Chloride, 100 grams / bottle**	Functional Specifications: Used as a substrate in Flame test to visually identify calcium or its ion based on the characteristic color it emits on the Bunsen flame.		
5	**Copper Sulfate, CuSO4, 100 grams / bottle**	Functional Specifications: Used as : a) an oxidizing agent or oxidant and is reduced in a spontaneous [chemical (redox) reaction decreasing its oxidation state with metals above it, like zinc, in the Activity Series of Metals]		
6	**Gentian Violet, 100 ml / bottle**	Functional Specifications: Used in microscopy as biological stain.		
7	**Iodine Solution, 100 ml / bottle**	Functional Specifications: Used in microscopy as biological stain.		
8	**Magnesium Ribbon, 25 grams, 1 roll**	Functional Specifications: Used as a reactant and is ignited over a flame to demonstrate a highly exothermic combustion reaction		
9	**Manganese Dioxide, 50 grams / bottle**	Functional Specifications: Used as a catalyst to demonstrate decomposition reaction of hydrogen peroxide and observe its effect on the rate of chemical reaction		

Detailed Specification

Item	Description	Technical Specifications	STATEMENT OF COMPLIANCE (State Comply or Not Comply)	BIDDER'S ACTUAL OFFER
10	**Microscope's Immersion Oil, 100mL/bot**	Functional Specifications: Used to increase the resolving power of the microscope's 100x objective.		
11	**Phenolphthalein, 100 grams/bottle**	Functional Specifications: Used as an indicator to effect a color change to distinguish an acid from a base and in perforing acid base titration		
12	**Potassium Chloride, 100 grams / bottle**	Functional Specifications: Used as a substrate in Flame test to visually identify a specific element or an unknown metalloid ion based on the characteristic color it emits on the Bunsen flame.		
13	**Potassium Iodide, 100 grams / bottle**	Functional Specifications: Used as : a) a substrate in Flame test to visually identify potassium or its ion based on the characteristic color it emits on the Bunsen flame		
14	**Sodium Hydroxide (Lye), 250 grams/bottle**	Functional Specifications: Used :		
15	**Yeast, active dry, 100 grams / bottle**	Functional Specifications: Used to break down some of the starch and sugar in the mixture to produce more yeast cells and carbon dioxide gas.		
16	**Zinc Chloride, 100 grams / bottle**	Functional Specifications: Used as a substrate in Flame test to visually identify zinc or its ion based on the characteristic color it emits on the Bunsen flame.		
17	**Zinc metal, pellets/mossy, 100 grams / bottle**	Functional Specifications: Used as a reducing agent to reduce the other reactant of a single displacement (redox reaction) with metals above it in the Activity Series of Metals		

Detailed Specification

Item	Description	Technical Specifications	STATEMENT OF COMPLIANCE (State Comply or Not Comply)	BIDDER'S ACTUAL OFFER
LOT 3: GLASSWARES AND LAB TOOLS (MI-LOT 3)				
1	**Beaker, borosilicate, 250 mL**	Functional Specifications: Used to contain/hold/prepare solids and liquids during chemical reaction and to heat them over a Bunsen burner's flame up to more than 100°C for normal, standard use service		
2	**Beaker, borosilicate, 50 mL**	Functional Specifications: Used to contain/hold/prepare solids and liquids during chemical reaction and to heat them over a Bunsen burner's flame up to more than 100 °C		
3	**Burette, 10 mL capacity (acid)**	Functional Specifications: Used to hold/contain the acid up to 10 mL capacity as a titrant to be delivered/ dispensed to titrate the base in acid-base titration to determine unknown concentration of base		
4	**Burette, 10 mL capacity (base)**	Functional Specifications: Used to hold/contain the base as a titrant to be delivered/ dispensed to tirate an acid up to 10 mL capacity in acid-base titration to determine unknown concentration of acid		
5	**Burner, Alcohol, glass, 150 mL Capacity**	Functional Specifications: Used to produce hot, consistent open flame for slow/gentle heating of glasswares and substances		
6	**Burner, Bunsen**	Functional Specifications: Used to :		
7	**Cork Stopper # 5 (for Ø 16mm test tube)**	Functional Specifications: Used to seal the openings of 16 mm diameter test tubes and other laboratory glassware to prevent leaks, hazards and contamination to yield positive results during chemical reactions		
8	**Crucible with lid/cover**	Functional Specifications: Used as a container to heat metals or other substances may be melted or subjected to very high temperatures		
9	**Dish, Evaporating, 75 mL**	Functional Specifications: Used to contain/hold substances and to heat chemical solutions gradually, driving off the water to leave residual chemical solute		
10	**Distillation set-up: Condenser, Liebig-type**	Functional Specifications: Used to condense the water vapor into its liquid state producing a distillate		
11	**Distillation set-up: Distilling Flask, borosilicate, 250ml,**	Functional Specifications: Used to hold/ contain the liquid to be distilled in distillation, as one of the simple separation technique		
12	**Double burette clamp**	Functional Specifications: Used to hold and secure two burettes on a stand, so that each burette is fixed and more convenient for the experiment.		
13	**Electrolysis Apparatus, student-type (Brownlee)**	Functional Specifications: Used to demonstrate and describe the decomposition reactions at the electrodes during the electrolysis of water, producing 1:2 ratio of hydrogen & oxygen gases respectively, by passing DC current through water.		
14	**Flask, Erlenmeyer, borosilicate, narrow-mouth, 250 mL**	Functional Specifications: Used to :		
15	**Funnel, borosilicate, fluted**	Functional Specifications: Used to direct the smooth flow of the liquid or fine-grained substances into another container tp prevent spills		
16	**Glass Tubing**	Functional Specifications: Used to contain/hold/mix liquids or gases during chemical reactions and to connect other pieces of equipment/glasswares to a gas or liquid assembly		
17	**Manometer, Open U-tube**	Functional Specifications: Used to indicate the difference in the heights of the manometric liquid to measure pressure		
18	**Mortar and Pestle, porcelain, 150 mL.**	Functional Specifications: Used to pulverize/mash/grind and to mix materials in a mortar using a pestle		
19	**Osmosis Apparatus**	Functional Specifications: Used to to show that water passes through a semi-permeable membrane causing a rise in the level of water in the thistle tube		
20	**Reagent Bottle, narrow-mouth, amber, borosilicate, 250 mL**	Functional Specifications: Used to contain/store and to provide UV protection of prepared light sensitive solutions/substances to prevent change/alteration in the composition of their contents		

Detailed Specification

Item	Description	Technical Specifications	STATEMENT OF COMPLIANCE (State Comply or Not Comply)	BIDDER'S ACTUAL OFFER
21	**Reagent Bottle, wide-mouth, transparent, borosilicate, 250 mL**	Functional Specifications: Used to hold/ contain/store prepared solutions/ substances		
22	**Rubber Stopper # 0 (for Ø 16mm test tube)**	Functional Specifications: Used to seal the openings of 16 mm diameter test tubes and other laboratory glassware that require a tighter seal or a greater degree of chemical resistance.to prevent leaks, hazards and contamination		
23	**Spoon-spatula, porcelain and glazed**	Functional Specifications: Used to hold/contain and transfer solids and liquids from one container to the other		
24	**Stirring Rod, Ǿ 6 mm x 250 mm long**	Functional Specifications: Used to mix liquids and solids		
25	**Test tube brush**	Functional Specifications: Used to clean test tubes and other small sized glasswares		
26	**Test Tube, borosilicate, Ǿ 16 mm x 150 mm long**	Functional Specifications: Used to contain/hold a small chemical reaction , to mix small quantities of solids and liquids, and to heat small quantities of substances		
27	**Tong, Crucible**	Functional Specifications: Used to lift and hold crucibles,remove the lids from crucibles, transfer evaporating dishes or picking small objects out of a reaction container		
28	**Vial, screw-neck, 25 ml. (with screw-type plastic cap)**	Functional Specifications: Used to hold/contain/store/mix small quantities of samples/ solutions/substances up to 25 mL		
29	**Vial, screw-neck, 50 mL. (with screw-type plastic cap)**	Functional Specifications: Used to hold/contain/store/mix small quantities of samples/ solutions/substances up to 50 mL		
30	**Watch Glass, Ø 90 mm**	Functional Specifications: Used to:		

Detailed Specification

Item	Description	Technical Specifications	STATEMENT OF COMPLIANCE (State Comply or Not Comply)	BIDDER'S ACTUAL OFFER
31	**Pipette, Beral, 1 mL**	Functional Specifications: Used to transfer/dispense liquid samples.		
32	**Tong, Beaker**	Functional Specifications: Used to hold heated beakers.		
LOT 4: SCIENCE DEVICES, INSTRUMENTS, AND MEASURING TOOLS – EARTH & SPACE AND LIVING THINGS (MI-LOT 4)				
1	**Balance, Toploading, Electronic**	Functional Specifications: Used to measure an object's mass up to 500 g capacity accurate up to 0.01 g readability		
2	**Centrifuge**	Functional Specifications: Used as one of the separation techniques for mixtures and compounds when the density difference between the particles and liquid is great, the particles are large, and the liquid viscosity is low. Separates blood at 3300 rpm and can be slowed down to separate other fluids at lower G forces such as urine specimens		
3	**Electrical Conductivity (Conductivity of Solutions) Apparatus**	Functional Specifications: Used as a visual demonstration of the electrical conductivity of various liquids/solutions.		
4	**Laboratory Hot Plate with magnetic stirrer**	Functional Specifications: a)Used to heat samples, glasswares and its contents, solutions, and substances uniformly with constant stirring , or		
5	**Microscope, Digital**	Functional Specifications: Used to focus specimen with the image viewed through the LCD screen.		
6	**Soil pH, Moisture, Sunlight Meter**	Functional Specifications: Used to measure pH, moisture content of soil and measure sunlight available to the soil sample in real time		
7	**Telescope, Astronomical (Reflecting)**	Functional Specifications: Used to enhance the appearance of details of celestial objects not visible to the unaided eye		
LOT 5: MATHEMATICAL MANIPULATIVES (MI-LOT 5)				
1	**Algebra Tile Set, plastic**	Functional Specifications: Used to demonstrate algebraic concept up to second degree polynomial.		
2	**Base Ten Blocks**	Functional Specifications: Used to demonstrate abstract mathematical concept of the number system such as one-to-one correspondence, place value, and basic addition and subtraction		
3	**Beads**	Functional Specifications: Used to reinforce counting, sorting, patterning and sequencing.		
4	**Circle Area Demonstrator**	Functional Specifications: Used to demonstrate area of a circle.		
5	**Compass, Drawing, student type**	Functional Specifications: Used to draw/construct arcs, semi-circles and circles.		
6	**Cuisenaire Rods, set of 5**	Functional Specifications: Used to provide an interactive, hands-on way to explore mathematics and learn mathematical concepts, such as the four basic arithmetical operations, working with fractions and finding divisors.		
7	**Elapsed Time (Clock) Set**	Functional Specifications: Used to demonstrate time and other related concepts.		
8	**Geoboard, 11 x 11**	Functional Specifications: Used to explore basic concepts in plane geometry such as perimeter, area and the characteristics of triangles and other polygons.		
9	**Geoboard, 5 x 5**	Functional Specifications: Used to explore basic concepts in plane geometry such as perimeter, area and the characteristics of triangles and other polygons		
10	**Geostrips**	Functional Specifications: Used to make and represent different shapes.		
11	**Ghost Grid Whiteboard, Mobile Magnetic**	Functional Specifications: Used to aid classroom instructions especially in graphical representations such as linear, quadratic, polynomial, histogram, normal curve, etc.		
12	**Linking Cubes**	Functional Specifications: Used to assist with the understanding of mathematical concepts		

Detailed Specification

Item	Description	Technical Specifications	STATEMENT OF COMPLIANCE (State Comply or Not Comply)	BIDDER'S ACTUAL OFFER
13	**Model, Basic 3D Geometrical Collapsible**	Functional: Used to demonstrate relational geometric concepts between polygons and polyhedrons; aid derivation of formula (surface area and volume) of polyhedrons.		
14	**Model, Basic 3D Geometrical Solids**	Functional Specifications: Used to represent basic three-dimensional figures.		
15	**Pattern Blocks, 250 pcs/set**	Functional Specifications: Used to explore mathematical concpets, including congruence, similarity, symmetry, area, perimeter, patterns, functions, fractions, and graphing		
16	**Pentominoes**	Functional Specifications: Used to develop spatial thinking		
17	**Plastic Two-colored Counters, 1-inch diameter, 200 pcs/set**	Functional Specifications: Used to represent integers and demonstrate fundamental operations on integers.		
18	**Probability Kit**	Functional Specifications: A set of mathematical manipulative used to demonstrate different concept-formation activities in probability.		
19	**Tangrams, set of 30**	Functional Specifications: Used to introduce spatial relationships		
LOT 9: CHEMICALS (MI-LOT 9)				
1	**Benedict's Solution, 100ml/bottle**	Functional Specifications: Used to test for levels/ traces of simple reducing sugars		
2	**Boric Acid, 100 grams / bottle**	Functional Specifications: Used as a substrate in Flame test to visually identify boron or its specific unknown metalloid ion based on the characteristic color it emits on the Bunsen flame.		
3	**Bromothymol Blue**	Functional Specifications: Used as an indicator of dissolved Carbon dioxide.		
4	**Calcium Chloride, 100 grams / bottle**	Functional Specifications: Used as a substrate in Flame test to visually identify calcium or its ion based on the characteristic color it emits on the Bunsen flame.		
5	**Copper Sulfate, CuSO4, 100 grams / bottle**	Functional Specifications: Used as : a) an oxidizing agent or oxidant and is reduced in a spontaneous [chemical (redox) reaction decreasing its oxidation state with metals above it, like zinc, in the Activity Series of Metals]		
6	**Gentian Violet, 100 ml / bottle**	Functional Specifications: Used in microscopy as biological stain.		
7	**Iodine Solution, 100 ml / bottle**	Functional Specifications: Used in microscopy as biological stain.		
8	**Magnesium Ribbon, 25 grams, 1 roll**	Functional Specifications: Used as a reactant and is ignited over a flame to demonstrate a highly exothermic combustion reaction		
9	**Manganese Dioxide, 50 grams / bottle**	Functional Specifications: Used as a catalyst to demonstrate decomposition reaction of hydrogen peroxide and observe its effect on the rate of chemical reaction		
10	**Microscope's Immersion Oil, 100mL/bot**	Functional Specifications: Used to increase the resolving power of the microscope's 100x objective.		
11	**Phenolphthalein, 100 grams/bottle**	Functional Specifications: Used as an indicator to effect a color change to distinguish an acid from a base and in perforing acid base titration		
12	**Potassium Chloride, 100 grams / bottle**	Functional Specifications: Used as a substrate in Flame test to visually identify a specific element or an unknown metalloid ion based on the characteristic color it emits on the Bunsen flame.		
13	**Potassium Iodide, 100 grams / bottle**	Functional Specifications: Used as : a) a substrate in Flame test to visually identify potassium or its ion based on the characteristic color it emits on the Bunsen flame		
14	**Sodium Hydroxide (Lye), 250 grams/bottle**	Functional Specifications: Used :		
15	**Yeast, active dry, 100 grams / bottle**	Functional Specifications: Used to break down some of the starch and sugar in the mixture to produce more yeast cells and carbon dioxide gas.		

Detailed Specification

Item	Description	Technical Specifications	STATEMENT OF COMPLIANCE (State Comply or Not Comply)	BIDDER'S ACTUAL OFFER
16	**Zinc Chloride, 100 grams / bottle**	Functional Specifications: Used as a substrate in Flame test to visually identify zinc or its ion based on the characteristic color it emits on the Bunsen flame.		
17	**Zinc metal, pellets/mossy, 100 grams / bottle**	Functional Specifications: Used as a reducing agent to reduce the other reactant of a single displacement (redox reaction) with metals above it in the Activity Series of Metals		
LOT 10: GLASSWARES AND LAB TOOLS (MI-LOT 10)				
1	**Beaker, borosilicate, 250 mL**	Functional Specifications: Used to contain/hold/prepare solids and liquids during chemical reaction and to heat them over a Bunsen burner's flame up to more than 100°C for normal, standard use service		
2	**Beaker, borosilicate, 50 mL**	Functional Specifications: Used to contain/hold/prepare solids and liquids during chemical reaction and to heat them over a Bunsen burner's flame up to more than 100 °C		
3	**Burette, 10 mL capacity (acid)**	Functional Specifications: Used to hold/contain the acid up to 10 mL capacity as a titrant to be delivered/ dispensed to titrate the base in acid-base titration to determine unknown concentration of base		
4	**Burette, 10 mL capacity (base)**	Functional Specifications: Used to hold/contain the base as a titrant to be delivered/ dispensed to tirate an acid up to 10 mL capacity in acid-base titration to determine unknown concentration of acid		
5	**Burner, Alcohol, glass, 150 mL Capacity**	Functional Specifications: Used to produce hot, consistent open flame for slow/gentle heating of glasswares and substances		
6	**Burner, Bunsen**	Functional Specifications: Used to :		
7	**Cork Stopper # 5 (for Ø 16mm test tube)**	Functional Specifications: Used to seal the openings of 16 mm diameter test tubes and other laboratory glassware to prevent leaks, hazards and contamination to yield positive results during chemical reactions		
8	**Crucible with lid/cover**	Functional Specifications: Used as a container to heat metals or other substances may be melted or subjected to very high temperatures		
9	**Dish, Evaporating, 75 mL**	Functional Specifications: Used to contain/hold substances and to heat chemical solutions gradually, driving off the water to leave residual chemical solute		
10	**Distillation set-up: Condenser, Liebig-type**	Functional Specifications: Used to condense the water vapor into its liquid state producing a distillate		
11	**Distillation set-up: Distilling Flask, borosilicate, 250ml,**	Functional Specifications: Used to hold/ contain the liquid to be distilled in distillation, as one of the simple separation technique		
12	**Double burette**	Functional Specifications: Used to hold and secure two burettes on a		
13	**Electrolysis**	Functional Specifications: Used to demonstrate and describe the		
14	**Flask, Erlenmeyer,**	Functional Specifications: Used to :		
15	**Funnel, borosilicate,**	Functional Specifications: Used to direct the smooth flow of the liquid		
16	**Glass Tubing**	Functional Specifications: Used to contain/hold/mix liquids or gases		
17	**Manometer, Open U-**	Functional Specifications: Used to indicate the difference in the heights		
18	**Mortar and Pestle,**	Functional Specifications: Used to pulverize/mash/grind and to mix		
19	**Osmosis Apparatus**	Functional Specifications: Used to to show that water passes through a		
20	**Reagent Bottle,**	Functional Specifications: Used to contain/store and to provide UV		
21	**Reagent Bottle, wide-**	Functional Specifications: Used to hold/ contain/store prepared		
22	**Rubber Stopper # 0**	Functional Specifications: Used to seal the openings of 16 mm diameter		
23	**Spatula, spoon,**	Functional Specifications: Used to hold/contain and transfer solids and		
24	**Stirring Rod, Ǿ 6 mm**	Functional Specifications: Used to mix liquids and solids		
25	**Test tube brush**	Functional Specifications: Used to clean test tubes and other small sized		
26	**Test Tube,**	Functional Specifications: Used to contain/hold a small chemical		
27	**Tong, Crucible**	Functional Specifications: Used to lift and hold crucibles,remove the		
28	**Vial, screw-neck, 25**	Functional Specifications: Used to hold/contain/store/mix small		
29	**Vial, screw-neck, 50**	Functional Specifications: Used to hold/contain/store/mix small		
30	**Watch Glass, Ø 90 mm**	Functional Specifications: Used to:		

Detailed Specification

Item	Description	Technical Specifications	STATEMENT OF COMPLIANCE (State Comply or Not Comply)	BIDDER'S ACTUAL OFFER
LOT 11: SCIENCE DEVICES, INSTRUMENTS AND MEASURING TOOLS MATTER (MI-LOT 11)				
1	**Balance, Toploading,**	Functional Specifications: Used to measure an object's mass up to 500 g		
2	**Balance, Triple Beam,**	Functional Specifications: To measure mass of solids, liquids and gases		
3	**Calorimeter**	Functional Specifications: Used to measure heat effects or heat of		
4	**Centrifuge**	Functional Specifications: Used as one of the separation techniques for		
5	**Electrical Conductivity**	Functional Specifications: Used as a visual demonstration of the		
6	**Filter Paper, crepe,**	Functional Specifications: Used to filter/separate mixtures solids from		
7	**Gloves, Hand, super**	Functional Specifications: Used to protect hands against mechanical		
8	**Graduated Cylinder,**	Functional Specifications: Used to measure and to deliver the volume of		
9	**Graduated Cylinder,**	Functional Specifications: Used to measure and to deliver the volume of		
10	**Graduated pipette**	Functional Specifications: Used to measure the amount of liquid being		
11	**Hydrometer for heavy**	Functional Specifications: Used to measure relative density of heavy		
12	**Hydrometer for light**	Functional Specifications: Used to measure relative density of light		
13	**Laboratory Hot Plate**	Functional Specifications: a)Used to heat samples, glasswares and its		
14	**Safety Goggles,**	Functional Specifications: Used to protect eyes and face against		
15	**Thermometer,**	Functional Specifications: Used to measure the temperature		
LOT 12: SCIENCE DEVICES, INSTRUMENTS, AND MEASURING TOOLS – EARTH & SPACE AND LIVING THINGS (MI-LOT 12)				
1	**Anemometer with**	Functional Specifications: Used to measure wind speed in real time and		
2	**Anemometer, Simple**	Functional Specifications: Used to determine wind speed by calculating		
3	**Aneroid Barometer Set**	Functional Specifications: Used to demonstrate how an aneroid		
4	**Aneroid Barometer,**	Functional Specifications: Used to measure the prevailing atmospheric		
5	**Compass, Magnetic**	Functional Specifications: Used to find direction on the earth's surface		
6	**Dissecting Set with pan**	Functional Specifications: Used to perform a wide variety of		
7	**First Aid Kit**	Functional Specifications: Used to provide immediate medical help in an		
8	**Gloves, Surgical**	Functional Specifications: Used to protect hands from dirt and		
9	**Hand Lens, 10x**	Functional Specifications: Used for enlarging the appearance of objects		
10	**Hand Lens, 5x**	Functional Specifications: Used to produce a magnified image of an		
11	**Hexagonal Weigh**	Functional Specifications: Used for containment of relatively small		
12	**Lens Paper, 50's/pack**	Functional Specifications: Used to clean the microscope lenses.		
13	**Microscope,**	Functional Specifications: Used to view specimen not visible to the		
14	**Microscope, Digital**	Functional Specifications: Used to focus specimen with the image		
15	**Pipette, Beral, 1 mL**	Functional Specifications: Used to transfer/dispense liquid samples.		
16	**Prepared Slide Set,**	Functional Specifications: Used to contain the readily mounted and ready		
17	**Prepared Slide Set,**	Functional Specifications: Used to guide students through the events of		
18	**Reaction Plates with 6**	Functional Specifications: Used to contain small amount of samples of		
19	**Sedimentator Tube**	Functional Specifications: Used to demonstrate how soil sediments settle		
20	**Sling Psychrometer**	Functional Specifications: Used to measure relative humidity		
21	**Soil pH, Moisture,**	Functional Specifications: Used to measure pH, moisture content of soil		
22	**Soil/Test Sieve***	Functional Specifications: Used to separate and segragate different size		
23	**Thermometer,**	Functional Specifications: Used to determine the prevailing air		
24	**Tong, Beaker**	Functional Specifications: Used to hold heated beakers.		
25	**Wash bottle, plastic,**	Functional Specifications: Used to store and dispense water for diluting		
LOT 13: MATHEMATICAL MANIPULATIVES (MI-LOT 13)				
1	**Algebra Tile Set,**	Functional Specifications: Used to demonstrate algebraic concept up to		
2	**Base Ten Blocks**	Functional Specifications: Used to demonstrate abstract mathematical		
3	**Beads**	Functional Specifications: Used to reinforce counting, sorting, patterning		
4	**Circle Area**	Functional Specifications: Used to demonstrate area of a circle.		
5	**Compass, Drawing,**	Functional Specifications: Used to draw/construct arcs, semi-circles and		
6	**Cuisenaire Rods, set of**	Functional Specifications: Used to provide an interactive, hands-on way		
7	**Elapsed Time (Clock)**	Functional Specifications: Used to demonstrate time and other related		
8	**Geoboard, 11 x 11**	Functional Specifications: Used to explore basic concepts in plane		
9	**Geoboard, 5 x 5**	Functional Specifications: Used to explore basic concepts in plane		
10	**Geostrips**	Functional Specifications: Used to make and represent different shapes.		
11	**Ghost Grid**	Functional Specifications: Used to aid classroom instructions especially		
12	**Linking Cubes**	Functional Specifications: Used to assist with the understanding of		

Detailed Specification

Item	Description	Technical Specifications	STATEMENT OF COMPLIANCE (State Comply or Not Comply)	BIDDER'S ACTUAL OFFER
13	**Model, Basic 3D**	Functional:		
14	**Model, Basic 3D**	Functional Specifications: Used to represent basic three-dimensional		
15	**Pattern Blocks, 250**	Functional Specifications: Used to explore mathematical concpets,		
16	**Pentominoes**	Functional Specifications: Used to develop spatial thinking		
17	**Plastic Two-colored**	Functional Specifications: Used to represent integers and demonstrate		
18	**Probability Kit**	Functional Specifications: A set of mathematical manipulative used to		
19	**Tangrams, set of 30**	Functional Specifications: Used to introduce spatial relationships		
LOT 19: FORCE, MOTION AND ENERGY KITS (MI-LOT 19)				
1	**Advanced**	Functional Specifications: used to demonstrate the relationship between		
2	**Air Blower**	Functional Specifications: Used to blow air into light balls to keep them		
3	**Archimedes Principle**	Functional Specifications: Used to visually demonstrate that objects		
4	**Basic Electronics Kit**	Functional Specifications: Used to perform activities on resistors,		
5	**Basic Lens Set, acrylic**	Functional Specifications: Used to demonstrate refraction of light		
6	**Coefficient of Linear**	Functional Specifications: Used to verify coefficient of linear expansion		
7	**Connector, Black (# 18**	Functional Specifications: Used to effectively interconnect components		
8	**Connector, Red (# 18**	Functional Specifications: Used to effectively interconnect components		
9	**Connector, Yellow (#**	Functional Specifications: Used to effectively interconnect components		
10	**DC Ammeter**	Functional Specifications: Used to measure DC current in electrical		
11	**DC String Vibrator,**	Functional Specifications: Used to demostrate standing waves on a string		
12	**DC Voltmeter**	Functional Specifications: Used to measure DC voltage across		
13	**Diffraction slits &**	Functional Specifications: Used to investigate the concept of diffraction		
14	**Digital Geiger-Muller**	Functional Specifications: is used to measure alpha, beta, and gamma		
15	**Dry Cell Holder (size**	Functional Specifications: Used to securely mount size D dry cell in		
16	**Dry Cell, 1.5 volts, size**	Functional Specifications: Used to provide 1.5 volts DC power source		
17	**Engine Model**	Functional Specifications: Used to simulate the operation of a 4-stroke		
18	**Flask, Florence, glass,**	Functional Specifications: Used to contain liquids with unobstructed		
19	**Force Table**	Functional Specifications: Used to demonstrate the vector nature of		
20	**Fuse Holder w/ Fuse**	Functional Specifications: Used to demonstrate the function of fuses		
21	**Galvanometer**	Functional Specifications: Used to measure small electrical current		
22	**Helical Spring**	Functional Specifications: Used to demonstrate transverse waves		
23	**Iron Core Rod (non-**	Functional Specifications: Used to perform activities on electromagnet		
24	**Laser Light**	Functional Specifications: Used to produce laser beam for diffraction		
25	**Long Nose Pliers, 6-**	Functional Specifications: Used to bend tiny solid wire connectors		
26	**Magnet Wire**	Functional Specifications: Used to perform activities on electromagnet		
27	**Manometer, Open U-**	Functional Specifications: Used to measure pressure difference of fluids		
28	**Miniature Light Bulb**	Functional Specifications: Used to demonstrate the conversion of		
29	**Miniature Light Bulb**	Functional Specifications: Used to securely mount light bulb in place		
30	**Mirror Set, acrylic**	Functional Specifications: Used to demonstrate the formation of image		
31	**Motor-Generator**	Functional Specifications: Used to demonstrate the conversion of		
32	**Multimeter, digital**	Functional Specifications: Used to provide digital readouts of		
33	**Optical Bench Set**	Functional Specifications: Used for mounting lenses, mirrors, screen,		
34	**Pair of Bar Magnets**	Functional Specifications: Used to demonstrate that some things can		
35	**Prism Set**	Functional Specifications: Used to demonstrate characteristics of		
36	**Resistance Board**	Functional Specifications: Used to investigate factors affecting		
37	**Ring and Ball**	Functional Specifications: Used to demonstrate thermal expansion (and		
38	**Ripple Tank Set**	Functional Specifications: Used to demonstrate properties of transverse		
39	**Slinky Coil, metal**	Functional Specifications: Used to demonstrate longitudinal waves		
40	**Sound Resonance Set:**	Functional Specifications: Used to provide continuous sound tone of		
41	**Sound Resonance Set:**	Functional Specifications: Used to vary the length of air column to		
42	**Sound Resonance Set:**	Functional Specifications: Used to control the frequency, loudness and		
43	**Strobe Light**	Functional Specifications: Used to provide flashes of light so that fast		
44	**Switch, Knife type,**	Functional Specifications: Used to open and close an electrical circuit		
45	**Ticker Timer Set**	Functional Specifications: Used to measure and record short time		
46	**Toy Car, non-friction,**	Functional Specifications: Used to demonstrate that some things like		
47	**Tuning Fork Set**	Functional Specifications: Used to produce sound tones of fixed		

Detailed Specification

Item	Description	Technical Specifications	STATEMENT OF COMPLIANCE (State Comply or Not Comply)	BIDDER'S ACTUAL OFFER
48	**Vacuum Tube and**	Functional Specifications: Used to demonstrate the effect of air		

Prepared by:

ALJANRO M. BERTUOSO
SIGNATURE OVER PRINTED NAME
Engineer III

Approved by:

SIGNATURE OVER PRINTED NAME
Director III

Note:

Functional Specifications:
Describe here the functionalities in which the goods are expected to be utilized.

Performance Specifications:
Describe here the performance characteristics desired for the item, particularly indicating the manner or method

Design Specifications:
Describe here the precise measurements, tolerances, materials, in-process and finished product, tests, quality

Environmental Interface:
As may be applicable, describe here the environment in which the functions required of the goods and sevices

Comparative Description (by standard or benchmarks):
As may be applicable, identify the item to be procured by another product, brand or exclusive standard which