



Republic of the Philippines
Department of Education
Region VI-Western Visayas
SCHOOLS DIVISION OF KABANKALAN CITY

DIVISION MEMORANDUM


No. 142, s. 2023

MAR 29 2023

**DOWNLOADING OF FISCAL YEAR (FY) 2023 FUNDS TO THE SCHOOLS
DIVISION OFFICES (SDOS) FOR THE PROCUREMENT OF LEARNING TOOLS
AND EQUIPMENT (LTE)**

To: OIC-Assistant Schools Division Superintendent
Chief Education Supervisors (CID and SGOD)
Education Program Supervisors
Public Schools District Supervisors
Elementary and Secondary School Heads
All Others Concerned

1. Attached herewith is **Memorandum DM-OUCT-2023-042** issued by the Office of the Undersecretary for Curriculum and Teaching, Department of Education, Central Office on the ***Status on the Downloading of Fiscal Year (FY) 2023 Funds to the Schools Division Offices (SDOs) for the Procurement of Learning Tools and Equipment (LTE)***, which is self-explanatory.
2. Immediate and widest dissemination of this Memorandum are desired.

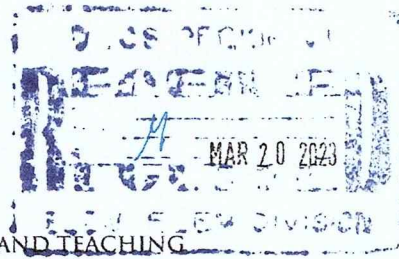

ARNOLD S. MAGDAET
Administrative Officer V
In-charge of the Division



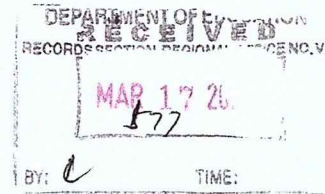
Republic of the Philippines

Department of Education

OFFICE OF THE UNDERSECRETARY FOR CURRICULUM AND TEACHING



MEMORANDUM
DM-CT-2023- 042



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

FROM : **GINA O. GONONG**
Undersecretary for Curriculum and Teaching

SUBJECT : **DOWNLOADING OF FISCAL YEAR (FY) 2023 FUNDS TO THE SCHOOLS DIVISION OFFICES (SDOs) FOR THE PROCUREMENT OF LEARNING TOOLS AND EQUIPMENT (LTE)**

DATE : **March 6, 2023**

Pursuant to DepEd Order No. 20, s. 2022, entitled "Multi-Year Guidelines on the Decentralization of the Procurement, Including the Quality Assurance, Delivery, Documentation, Storage, and Safekeeping of Learning Tools and Equipment for Science, Mathematics, and Technical Vocational Livelihood (LTE-SM and TVL) and the Downloading of the Funds Allotted Therefor", this Office reiterates the information stated therein that will serve as the basis for the download of the FY 2023 LTE funds.

To underscore the requirements in the procurement of LTE utilizing the FY 2023 funds in accordance with DO 20, s. 2022, Section V line item no. 4, "Documents to be Provided by BLR-Cebu," the following are the documents:

Science and Mathematics Equipment (SME)

- 4.1. List of eligible LTE-SM to be procured in a particular fiscal year with the required quantity as **Annex "A"**.
- 4.2. Technical Specifications of all Goods/items to be procured as **Annex "B"**.
- 4.3. Allocation list (list of recipient schools) with complete address based on the data of the updated LIS and EBEIS **Annex "C"**.
- 4.4. Inspection and Test Protocol per tools and equipment as **Annex "D"**.

Technical Vocational Livelihood (TVL)

- 4.5. List of eligible LTE-TVL to be procured in a particular fiscal year per specialization offered with the required quantity as **Annex "E"**.
- 4.6. Technical Specifications of all Goods/items to be procured as **Annex "F"**.



Republic of the Philippines
Department of Education
Bureau of Learning Resources



Annex "B" - Technical Specifications for LTE-SM (FY 2023)

Project Title Mass Production and Supply of Science and Mathematics Equipment
Packages to Public Elementary Schools for Grades 1 to 3 & Grades 4 to 6,
Public Junior High Schools for Grades 7 to 10, and Public Senior High School
for Grades 11 to 12 (CORE & STEM)

General Specification

1. Must be branded.
2. Must be free from toxic materials.
3. Must be properly packed.
4. Must be accompanied by a User's Manual written in English with correct grammar, spelling, and punctuation marks.
5. "Imported products should pass international quality control product standards and have international quality control product markings such as ASQC, AFCIQ, ASQ, DGQ, EOQC, IQA, CE, ISO, ASTM, and the likes, while locally made products (Philippine-made) should pass the local quality control product standards and bear the PS mark."

Detailed Specification

Item	DESCRIPTION	
1	Lamp, Desk, Heavy Base	<p>Functional Specifications: Used to provide heat and illumination on specimen under study</p> <p>Performance Specifications: Should be able to provide heat and illumination on specimen under study</p> <p>Design Specifications:</p> <ol style="list-style-type: none"> 1. Heavy base, able to stand by itself 2. 35 inches length minimum 3. Easily adjustable to direct the light wherever you need it the most 4. With On and Off Switch 5. Power source: AC 220 volts line; included with 60-100 Watts Yellow Light bulb 6. Capacity: 100 watts 7. Preferable ungrounded plug (If the plug is grounded, an adapter should include in the item.)

Detailed Specification

Item	DESCRIPTION	
		8. With English User's Manual that includes Operation Guide 9. Should be branded
2	Beaker, Plastic 500 mL	<p>Functional Specifications: Used to contain liquids and allow liquids to flow thru spout when overfilled</p> <p>Performance Specifications: Should be able to contain liquids and allow liquids to flow thru spout when overfilled</p> <p>Design Specifications:</p> <ol style="list-style-type: none"> 1. Material: polypropylene plastic 2. Capacity: 500 mL Increments: 10 mL 3. Height: 12 cm 4. Diameter: 8 cm 5. Must have container box. 6. Must be free from any toxic material.
3	Dry Cell, 9 volts	<p>Functional Specifications: Used to provide 9 volts DC power to digital multimeter</p> <p>Performance Specifications: Should be able to provide 9 volts DC power to digital multi meter</p> <p>Design Specifications: 1. industry standard 9 volts dry cell</p>
4	Musical Instrument (Miniature Guitar)	<p>Functional Specifications: Used to demonstrate musical application of standing waves</p> <p>Performance Specifications: Should be able to demonstrate musical application of standing waves</p> <p>Design Specifications:</p> <ol style="list-style-type: none"> 1. Mini acoustic type, half-size guitar, any color, surface finish: varnish 2. Made of good quality wood without sign of warp 3. Minimum dimensions: Overall length: 33 inches, Width:12 inches, Depth: 3 1/2 inches 4. Standard guitar steel strings (Nos. 1-6), 18 fret minimum
5	SET OF TOOLS:	
5	Set of Tools: Ball Peen Hammer, handle length is 11", 350g approx. weight, 1 pc/set	<p>Functional Specifications: Used to peen dent surfaces in metals</p> <p>Performance Specifications: Should be able to to peen dent surfaces in metals</p> <p>Design Specifications: Ball Peen Hammer, handle length 11 inches, 350 grams gross weight approx., 1 pc. /set</p>

Detailed Specification

Item	DESCRIPTION	
5	Set of Tools: Long Nose Pliers, 6", 1 pair/set	<p>Functional Specifications: Used to bend tiny solid wire connectors</p> <p>Performance Specifications: Should be able to bend tiny solid wire connectors</p> <p>Design Specifications: Long Nose Pliers with side cutter, 6 inches long, chrome vanadium material, 1 pair/set</p>
5	Set of Tools: Mechanical Wire Cutter and Pliers, 6.5", 1 pair/set	<p>Functional Specifications: Used to bend large wires</p> <p>Performance Specifications: Should be able to bend large wires</p> <p>Design Specifications: Mechanical-Wire Cutter and Pliers, 6 1/2 inches, chrome vanadium material, 1 pair/set</p>
5	Set of Tools: Precision Screwdrivers Set, 6 pcs/set, with plastic casing, 1 set/set	<p>Functional Specifications: Used to drive precision screws</p> <p>Performance Specifications: Should be able to to drive precision screws</p> <p>Design Specifications: Precision Screwdrivers Set, 6 pc. (3 phillips, 3 flats)/set, with plastic casing, 1 set</p>
5	Set of Tools: Screwdriver, flat, 6", 1 pc/set	<p>Functional Specifications: Used to drive flat head screws</p> <p>Performance Specifications: Should be able to drive flat head screws</p> <p>Design Specifications: Screwdriver flat, 3/16 inches tip width x 6 inches long, chrome vanadium material, 1 pc. /set;</p>
5	Set of Tools: Screwdriver, phillips, 6", 1 pc/set	<p>Functional Specifications: Used to drive phillips type screws</p> <p>Performance Specifications: Should be able to drive phillips type screws</p> <p>Design Specifications: Screwdriver, Phillips, Point size blade #3 x 6" long, chrome vanadium material, 1 pc/set;</p>
5	Set of Tools: Soldering Iron, 60 watts, 1 pc/set	<p>Functional Specifications: Used to heat electrical contacts for permanent joints</p> <p>Performance Specifications: Should be able to heat electrical contacts for permanent joints</p> <p>Design Specifications: Soldering Iron, 60 watts, small type, wooden handle, 1 pc. /set;</p>
	Set of Tools: Soldering Lead	<p>Functional Specifications: Used to provided permanent joint for different electrical components</p>

Detailed Specification

Item	DESCRIPTION	
5	Soldering Lead, Ø1mm, Grade 60/40, Wt.: 1 lb/spool, 1 spool/set	<p>Performance Specifications: Used to provided permanent joint for different electrical components</p> <p>Design Specifications: Soldering Lead, Ø 1 mm, Grade 60/40, weight: 1 lb./spool, 1 spool/set</p>
5	Set of Tools: Soldering Paste, 50 grams/can, 1 can/set	<p>Functional Specifications: Used to provide better adhesion of solder lead to electrical joints</p> <p>Performance Specifications: Used to provide better adhesion of solder lead to electrical joints</p> <p>Design Specifications: Soldering Paste, all purpose flux, non-corrosive, 50 grams/can, 1 can/set;</p>
5	Set of Tools: Tweezers, stainless steel, with curved tips, 6.5" long, 1 pair/set	<p>Functional Specifications: Used to hold and pick tiny electronics components</p> <p>Performance Specifications: Used to hold and pick tiny electronics components</p> <p>Design Specifications: Tweezers, stainless steel, with curved tips, 6 1/2 inches long, 1 pair/set;</p>
6	Beaker, borosilicate, 1000 mL	<p>Functional Specifications: Used to serve as container for mixing and for heating liquids.</p> <p>Performance Specifications: Must be able to serve as container for mixing and for heating liquids.</p> <p>Design Specifications:</p> <ol style="list-style-type: none"> 1.Griffin type, borosilicate, transparent, bubble-free glass 2. Shape: a cylindrical container with flat bottom 3.Thickness range: 1.5 mm to 2.0 mm 4. Permanent white graduations, with white enamel marking spot 5. Features an easy-pour spout 6. Capacity: 1000 mL; ± 10% enameled onto the glass 7. Single graduated metric scale 8. Graduation starts at 200 mL in 100 mL increments 9. Height range: 140 mm to 160 mm 10. Outside diameter: 100 mm to 110 mm 11. There must be no cracks and sharp parts 12. Safely packed in a compartmentalized box
		<p>Functional Specifications: Used to secure the specimen under study.</p> <p>Performance Specifications: Must be able to secure the specimen under study.</p>

Detailed Specification

Item	DESCRIPTION	
7	Dish, Petri	<p>Design Specifications:</p> <ol style="list-style-type: none"> 1. Reusable, borosilicate, circular glass with beaded edge; 2. Bubble-free, plain surface 3. Outside Diameter of Cover: 100 mm\pm2 mm; 4. Outside Diameter of Dish: 92 mm \pm 2 mm; 5. Overall height with cover (as assembled): 20 mm \pm 2 mm 6. Glass thickness range: 2 mm to 2.2 mm 7. There must be no cracks and sharp edges 8. Safely packed in a compartmentalized box
8	Glass Cover Slips, 100's/box	<p>Functional Specifications: Used to secure the wet mount sample specimen.</p> <p>Performance Specifications: Must be able to secure the wet mounted sample specimen.</p> <p>Design Specifications:</p> <ol style="list-style-type: none"> 1. Pre-cleaned cover glasses and not sticking from each other 2. Material: Transparent glass 3. Quantity: 100's/small plastic box 4. Dimension: 22 mm x 22 mm square 5. Thickness: 0.13 mm - 0.17 mm 6. There shall be no chipped edges 7. Safely packed in a plastic box
9	Glass Slides, 72's/box	<p>Functional Specifications: Used to contain the specimen for examination under the microscope.</p> <p>Performance Specifications: Must be able to accommodate the specimen subject for examination under the microscope.</p> <p>Design Specifications:</p> <ol style="list-style-type: none"> 1. Clear, flat glass; free from moisture, dirt, and film; 2. No color, no frost and no chipped edges 3. Dimension: 75 mm (\pm1 mm) x 25 mm (\pm 1 mm); 4. Thickness: 1.1 mm (\pm 0.1 mm) 5. No sharp edges and pointed corners 6. Packed in a box containing 72 slides with thin paper sheets in between them
		<p>Functional Specifications: Used to measure angles in degrees.</p> <p>Performance Specifications: Must be able to draw/construct and measure angles and arcs up to 180°.</p>

Detailed Specification

Item	DESCRIPTION	
10	Protractor, student-type	<p>Design Specifications:</p> <ol style="list-style-type: none"> 1. Protractor, student-type, plastic, transparent, semi-circular, 180°; 2. Ø150mm (or 75mm radius), 1mm thick (minimum); 3. Angular graduations are in degrees, from 0° to 180°. With two (2) sets of numerals, one reading clockwise and the other reading counterclockwise; 4. Linear graduations are in millimeters, from 0 to 100mm; 5. With a hole at vertex point enough for a fine string to pass through it; 6. Plastic Surface Finish: Smooth, clear, and free from scratches; 7. It must be horizontally level when laid flat on a table - no warping; 8. Comes with a plastic case; and
11	Ruler, Plastic, 12 inches/30 cm	<p>Functional Specifications: Used to measure length and draw straight lines</p> <p>Performance Specifications: Must be able to measure length of objects in flat surfaces up to 30cm in Metric and 12" in English standards of measurement.</p> <p>Design Specifications:</p> <ol style="list-style-type: none"> 1. Ruler, plastic, transparent, smooth surface, and 1 mm thick (minimum); 2. Approximate Width x Length: 28 mm x 314 mm; 3. Graduations: Metric graduations on one side while English graduations on the other side: <ul style="list-style-type: none"> *Metric graduations are in centimeters, from 0 cm to 30 cm, with every cm subdivided by 10. *English graduations are in inches, from 0 inches to 12 inches, with every inch subdivided by 16. 4. Clear, readable black, non-groove permanent prints (will not fade and cannot be scratched off); 5. Bendable up to U-shape when held at both ends; and 6. The item shall be free from toxic materials.
		<p>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 150°C for normal, standard use service</p> <p>Performance Specifications: Must be able to contain/hold /prepare solids and liquids during chemical reaction up to 100 mL capacity and heats them over a Bunsen burner's flame up to more than 150°C for normal, standard use service</p> <p>Design Specifications:</p>

Detailed Specification

Item	DESCRIPTION
12	<p>Beaker, borosilicate, 100 mL</p> <ol style="list-style-type: none"> 1. Type : Griffin, low form 2. Shape : Cylindrical container with straight sides, a flat bottom, and with a small spout (or "beak") to aid in pouring 3. Material: Borosilicate, clear and transparent bubble-free glass with the following dimensions: <ol style="list-style-type: none"> a) Outside diameter : 50 mm-52 mm b) Height: 70 mm-72 mm c) Thickness : 1.5 mm-2.0 mm 4. Capacity : 100 mL \pm 5% etched onto the glass;" 5. Graduation starts at : 20 mL in 10 mL increments. 6. Graduation range : 20 mL to 80 mL 7. With permanent white enamel graduations of approximate volumes, inscriptions 8. With large white marking spot 9. Features an easy-pour spout 10. With single graduated metric scale 11. Can withstand heating up to 200-230°C for normal, standard use service 12. Wrapped in paper, enclosed in bubble wrap, and packed in a compartmentalized box 13. Must be free from breakage, cracks , chipped rims and other defects 14. Comes with a brand, with five (5) years existence in the glass wares industry
13	<p>Beaker, borosilicate, 500 mL</p> <p>Functional Specifications:</p> <ol style="list-style-type: none"> a)Used to contain/hold/prepare solids and liquids during chemical reaction and to heat them over a Bunsen burner's flame up to 150°C for normal, standard use service and b)to serve as a water bath when heating flammable chemicals instead of an open flame to prevent ignition. <p>Performance Specifications:</p> <ol style="list-style-type: none"> a) Must be able to contain/hold /prepare solids and liquids during chemical reaction and heats them over a Bunsen burner's flame up to 150°C for normal, standard use service and to serve as a water bath b) to serve as a water bath when heating flammable chemicals instead of an open flame to prevent ignition. <p>Design Specifications:</p> <ol style="list-style-type: none"> 1. Type: Berzellius, tall form 2. Shape: Cylindrical container with straight sides, a flat bottom, with a small spout (or "beak") to aid pouring 3. Material : Borosilicate, clear, bubble free glass , Berzellius. tall form with the following dimensions: <ol style="list-style-type: none"> a) Outside Diameter Range :75 mm- 80 mm b) Height range: 136 mm -140 mm

Detailed Specification

Item	DESCRIPTION
	<p>c) Thickness :1.5 mm to 2.0 mm</p> <p>4. Capacity :500 mL ; \pm 5% etched/embossed onto the glass</p> <p>5. With permanent white enamel graduations of approximate volumes, inscriptions and</p> <p>6. With large white marking spot</p> <p>7. With easy pour spout</p> <p>8. Double graduated metric scale</p> <p>9. Marked to fill: Graduation starts at 50 mL in 50 mL increments</p> <p>10. Marked to empty: Graduation starts at 0 mL in 50 mL increments</p> <p>11. Can withstand heating up to 200-230°C for normal, standard use service</p> <p>12. Wrapped in paper, enclosed in bubble wrap and packed individually in a compartmentalized box</p> <p>13. Must be free from breakage, cracks , chipped rims and other defects</p> <p>14. Comes with a brand, with five (5) years existence in the glass wares industry</p>
14	<p>Cork borer</p> <p>Functional Specifications: Used to bore or to cut a round hole of six different diameters in a cork/rubber stopper with a steel ramrod/eject rod pushing the removed cork out of the borer</p> <p>Performance Specifications: Must be able to bore or to cut a round hole of six different diameters in a cork or rubber stopper and remove cork out of the borer by pushing it with a steel ramrod/eject rod</p> <p>Design Specifications:</p> <p>1. Shape of cork borer : Long, hollow round rod/tube with sharpened ends</p> <p>2. Material of tube/rod : Nickel-plated steel borer</p> <p>3. A set of six (6) different diameter sizes:(4 mm, 4.5 mm, 6 mm, 8 mm, 9.5 mm, 11 mm)</p> <p>4. Comes with a handles which are individually and permanently numbered (1-6) for easy identificationhandle</p> <p>a) Shape of handle: T-shaped</p> <p>b) Material of handle : Hard plastic</p> <p>c) Finish: Smooth</p> <p>d)Color of handle: Red</p> <p>5. Includes a ramrod/eject rod pushing the removed cork out of the borer Material of ramrod/eject rod: Steel</p> <p>6. Packaging: Resealable plastic pouch</p> <p>7.Comes with a brand</p>
	<p>Functional Specifications: Used to measure/prepare/contain a precise volume of standard solutions at a certain temperature and precise dilution of solutions up to 250 mL</p>

Detailed Specification

Item	DESCRIPTION
15	<p>Performance Specifications: Must be able to measure/prepare/contain a precise volume of standard solutions at a certain temperature and precise dilution of solutions up to 250 mL</p> <p>Design Specifications:</p> <ol style="list-style-type: none"> 1. Type: Class A 2. Shape : A round or pear-shaped bulb, a long thin neck topped by a snap cap and with flat bottom 3. Material of body: Borosilicate , clear, transparent and bubble-free, glass with the following dimensions: <ol style="list-style-type: none"> a) Height: 225 mm b) Outside diameter : 78 mm (approx.) c) Size: 250 mL d) Tolerance: ± 0.12 mL 4. With heavy duty rim 5. Comes with snap cap <ol style="list-style-type: none"> a) Material of snap cap :High density plastic (polyethylene) b) With octagonal grip c) Snap-cap : No. 250 d) Color of snap cap: Blue 6. Must meet ASTM E- 694 for volumetric ware, ASTM E-542 for calibration of volumetric ware and ASTM E-288 for volumetric flasks. 7. Calibrated "to contain" (marked "TC" or "IN") 8. Manufacturer should be accredited by NIST standards or its equivalent to the country of origin to certify that their items are calibrated. 9. Must be free from breakage, cracks, sharp rims and other defects 10. Packaging : Roll up glassware in newspaper and secure with a piece of masking tape and place in a bubble pouch and individually packed in a sturdy box 11. Comes with a brand, with five (5) years existence in the glasswares industry
	<p>Functional Specifications: Used as a wire loop and heating element on which a metal salt or solid ionic compound is made to adhere into it and is heated to emit a characteristic color on the Bunsen flame to identify the particular metal present in the compound</p>

Detailed Specification

Item	DESCRIPTION	
16	Nichrome wire. 0.4, 100 ft	<p>Performance Specifications: Must be used as a wire loop on which a metal salt or solid ionic compound is made to adhere to, and is heated to emit a characteristic color on the Bunsen flame to identify the particular metal present in the compound in a laboratory activity, the Flame test</p> <p>Design Specifications:</p> <ol style="list-style-type: none"> 1. Shape: Round wire 2. Material of wire: Nichrome-Alloy of nickel and chromium, Ni80 Cr20 with the following dimensions: <ol style="list-style-type: none"> a) AWG size: 26 b) Diameter: 0.4 mm c) Length : 100 ft 3. Form: Soft, rust-free wire 4. Color: Silvery grey 5. Resistance : 2.57 ohms/foot 6. Annealed soft 7. Perfectly tensioned. Zero elongation, scratches, or other flaws. 8. Comes in a spool 9. Packed in a resealable plastic pouch 10. Comes with a brand
		<p>Functional Specifications: To measure the pH of a substance or solution indicating its acidity , being neutral,or its basicity/alkalinity in 0.1 pH readability</p> <p>Performance Specifications: Must be able to measure the pH of each substance/solution in 0.1 pH readability, :</p> <ol style="list-style-type: none"> a) For an acid : pH 0- pH 6.0 b) For basic/alkaline : pH 8.0 to pH 14.0. c) For neutral (distilled water) : pH 7.0 <p>Design Specifications:</p> <ol style="list-style-type: none"> 1. Type: Portable hand held digital pen type 2. Material : Plastic with the following dimensions : <ol style="list-style-type: none"> a) Length : 6.2 in (155.45 mm) (min) b) Width : 1.5 in (38.1 mm) (min) c) Height : 1.3 in (33.02 mm) (min) 3. With retractable electrode 4. Comes with one (1) pc protective cap 5. Electrodes extend up to 3.15" (80.01 mm) (min) 6. Waterproof 7. pH range: pH 0 to pH 14

Detailed Specification

Item	DESCRIPTION
17	<p>pH Meter, hand-held</p> <p>8. Accuracy: ± 0.2 pH</p> <p>9. Features a bold LCD display of pH</p> <p>10. With automatic temperature compensation</p> <p>11. Supplied with accessories:</p> <p>a) One (1) bottle pH 7.0 buffer solution Capacity of pH 7.0 buffer solution : 50 mL</p> <p>b) With one (1) pc calibration screwdriver</p> <p>c) One (1) pc 9V battery</p> <p>d) Packed in hard plastic carry case</p> <p>12. Manufacturer should be accredited by NIST standards or its equivalent to the country of origin to certify that their items are calibrated.</p> <p>13. With User's Manual in English</p> <p>14. With Student Worksheets/Teacher's Manual in English</p> <p>15. For numbers 13-14, the following technical specifications from a-e must be followed:</p> <p>a) For Contents List of materials, In Table form</p> <p>b) For User's Manual, Teacher's Guide, StudentWorksheets, Instruction Sheets/Assembly Guides, In sentences format</p> <p>i) With sentences grammatically correct and</p> <p>ii) With correct spelling and terminologies, punctuations and others</p> <p>c) In original print, not photocopied</p> <p>d) In colored pictures, drawings/illustrations</p> <p>e) In ten (10) mil laminated keycard that shall contain the actual colored picture of the model including the name: labeled with the required parts with details as follows</p> <p>i) Paper Size: A4 size , 80 gsm</p> <p>ii) Font: Times New Roman</p> <p>iii) Font size: 12</p> <p>iv) Orientation:Portrait</p> <p>v) Margins on all sides with 2 point width border line</p> <p>vi) Line with arrow head of 1.25 point with width shall point to the specific part being labeled</p> <p>16. Must be free from sharp edges</p> <p>17. Must have a brand</p>
	<p>Functional Specifications: Used to seal the openings of narrow mouth 250 mL Erlenmeyer flasks and other laboratory glassware that require a tighter seal or a greater degree of chemical resistance with one 1) hole opening for insertion of a thermometer, glass tubing or stirrer for use during chemical reaction .to prevent leaks, hazards and contamination.</p>

Detailed Specification

Item	DESCRIPTION
18	<p>Rubber Stopper # 6 for Erlenmeyer Flask (narrow-mouth) 250 mL , 1 hole</p> <p>Performance Specifications: Must be able to seal the openings of narrow mouth 250 mL Erlenmeyer flasks and other laboratory glassware that require a tighter seal or a greater degree of chemical resistance .with one (1) hole opening for insertion of a thermometer, glass tubing or stirrer for use during chemical reaction to prevent leaks, hazards and contamination.</p> <p>Design Specifications:</p> <ol style="list-style-type: none"> 1. Shape: Cylindrical with a tapered bottom end 2. Material : Premium grade SBR black rubber compound with the following dimensions: <ol style="list-style-type: none"> a) Height: 25 mm b) Top Ø: 32 mm c)Bottom Ø : 26 mm d) Hole Ø: 5 mm 3. Number of holes :With one (1) hole 4. Dimension tolerance on height, top and bottom diameter : ± 0.5 mm 5. Hardness : 40 ± 5 Duro 6. Packed in resealable plastic bag 7. Comes with a brand
19	<p>Rubber Stopper # 6 for Erlenmeyer Flask (narrow-mouth) 250 mL , 2 holes</p> <p>Functional Specifications: Used to seal the openings of narrow mouth 250 mL Erlenmeyer flasks and other laboratory glassware that require a tighter seal or a greater degree of chemical resistance with two (2) holes opening for insertion of a thermometer, glass tubing or stirrer for use during chemical reaction to prevent leaks, hazards and contamination.</p> <p>Performance Specifications: Must be able to seal the openings of narrow mouth 250 mL Erlenmeyer flasks and other laboratory glassware that require a tighter seal or a greater degree of chemical resistance with two (2) holes opening for insertion of a thermometer, glass tubing or stirrer for use during chemical reaction to prevent leaks, hazards and contamination.</p> <p>Design Specifications:</p> <ol style="list-style-type: none"> 1. Shape: Cylindrical with a tapered bottom end 2. Material : Premium grade SBR black rubber compound with the following dimensions: <ol style="list-style-type: none"> a) Height: 25 mm b) Top Ø: 32 mm c) Bottom Ø : 26 mm d) Hole Ø: 5 mm 3. Number of holes : Two (2) holes 4. Dimension tolerance on height, top and bottom diameter : ± 0.5 mm

Detailed Specification

Item	DESCRIPTION	
		5. Hardness : 40 ± 5 Duro 6. Packed in resealable plastic bag 7. Comes with a brand
20	Triangular File, fine, 6" long, with plastic handle	<p>Functional Specifications: Used to cut the glass tubing</p> <p>Performance Specifications: Must be able to cut the glass tubing</p> <p>Design Specifications:</p> <ol style="list-style-type: none"> 1. Type of file: Triangular 2. Shape: Triangular 3. Material: High carbon steel 4. Kind of file: Fine, smooth 5. Length of file: 6" (150-152.4 mm) long 6. Material of handle: Plastic 7. Packed in a resealable pouch 8. Comes with a brand
21	Universal pH Paper, pH 0-14, 100 strips/pack	<p>Functional Specifications: Used as an indicator to determine/measure the pH of substances, whether it is an acid, neutral or a base</p> <p>Performance Specifications: Must be used as an indicator to effect a color change when it is dipped into the different substances to determine/measure the pH of each, through comparison with the pH color chart provided, which corresponds to:</p> <ol style="list-style-type: none"> a) For an acid : pH 0-pH 6; b) For a base : pH 8-pH 14. c) For distilled water : pH 7 <p>Design Specifications:</p> <ol style="list-style-type: none"> 1. Type: Test strips 2. Shape: Rectangle 3. Material: Cellulose/Paper based 4. Dimension of pH strip : <ol style="list-style-type: none"> a) Length : 69 mm x 6 mm 5. Number of colors in indicator test strip: In four colors to test pH values 6. Number of test strips : 100 pc strips 7. Packaging: Clear, transparent box 8. Shape of box: Square 9. With complete color chart for comparison with the color change to get the pH reading of the sample being tested 10. No sharp edges on box

Detailed Specification

Item	DESCRIPTION
	11. Measures pH 0-pH 14 12. Comes with a brand

2023 LIST OF LEARNING TOOLS AND EQUIPMENT - SCIENCE AND MATHEMATICS

ITEM NO.	PARTICULARS	"Tagged" - Eligible LTE-SM to procure in particular Key Stage					DOMAIN / LEARNING AREA	IDEAL QUANTITY	Unit
SME FOR DOWNLOADING		G1 to G3	G4 to G6	G7 to G10	CORE	STEM			
1	Lamp, Desk, Heavy Base	-	-	Tagged	-	-	Earth & Space	5	unit
2	Beaker, Plastic 500 mL	-	-	-	-	Tagged	Force, Motion and Energy	5	pc
3	Dry Cell, 9 volts	-	-	-	-	Tagged	Force, Motion and Energy	5	pc
4	Musical Instrument (Miniature Guitar)	-	-	Tagged	-	Tagged	Force, Motion and Energy	5	pc
5	Set of Tools	-	-	Tagged	Tagged	-	Force, Motion and Energy	1	set
	Set of Tools: Ball Peen Hammer, handle length is 11-inch, 350g approx. weight, 1 pc/set								
	Set of Tools: Mechanical Wire Cutter and Pliers, 6.5-inch, 1 pair/set								
	Set of Tools: Precision Screwdrivers Set, 6 pcs/set, with plastic casing, 1 set/set								
	Set of Tools: Screwdriver, flat, 6-inch, 1 pc/set								
	Set of Tools: Screwdriver, phillips, 6-inch, 1 pc/set								
	Set of Tools: Soldering Iron, 60 watts, 1 pc/set								
	Set of Tools: Soldering Lead, Ø1mm, Grade 60/40, Wt.: 1 lb/spool, 1 spool/set								
	Set of Tools: Soldering Paste, 50 grams/can, 1 can/set								
	Set of Tools: Tweezers, stainless steel, with curved tips, 6.5-inch long, 1 pair/set								
6	Beaker, borosilicate, 1000 mL	-	-	Tagged	-	-	Living Things and Their Environment	5	pcs
7	Dish, Petri	-	-	Tagged	-	-	Living Things and Their Environment	5	pcs
8	Glass Cover Slips, 100's/box	-	-	Tagged	-	-	Living Things and Their Environment	10	boxes
9	Glass Slides, 72 s/box	-	-	Tagged	-	-	Living Things and Their Environment	10	boxes
10	Protractor, student-type	Tagged	Tagged	Tagged	-	-	Mathematics	40	pcs
11	Ruler, Plastic, 12 inches/30 cm	Tagged	Tagged	Tagged	-	Tagged	Mathematics	40	pcs
12	Beaker, borosilicate, 100 mL	-	-	Tagged	Tagged	-	Matter	5	pc
13	Beaker, borosilicate, 500 mL	-	-	Tagged	Tagged	-	Matter	5	pc
14	Cork Borers	-	-	Tagged	-	Tagged	Matter	1	pc
15	Flask, Volumetric, borosilicate 250 mL	-	-	Tagged	Tagged	-	Matter	5	pc
16	Nichrome wire. 0.4, 100 ft (1 spool per package = 1.1 oz minimum with spool)	-	-	Tagged	-	Tagged	Matter	1	spool
17	pH Meter, hand-held	-	-	Tagged	-	Tagged	Matter	5	pc
18	Rubber Stopper # 6 for Erlenmeyer Flask (narrow mouth) 250 mL, 1 hole	-	-	Tagged	-	Tagged	Matter	5	pc
19	Rubber Stopper # 6 for Erlenmeyer Flask (narrow-mouth) 250 mL, 2 holes	-	-	-	Tagged	-	Matter	5	pc
20	Triangular File, fine, 6-inch long, with plastic handle	-	-	Tagged	Tagged	-	Matter	5	pc
21	Universal pH Paper, pH 0-14, 100 strips/pack	-	-	Tagged	Tagged	-	Matter	1	pack