



Republic of Philippines  
**DEPARTMENT OF EDUCATION**  
DepEd Complex, Meralco Avenue, Pasig City  
<https://www.deped.gov.ph/>



**PROJECT:** Mass Production and Supply of Science and Mathematics Equipment Packages to Public Elementary 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 and STEM)

**CONTRACT NO.:** 2022-BLR4(001to006)-BV-CB001-C027

**CONTRACT**

**THIS CONTRACT** made and entered into this \_\_\_\_\_ day of \_\_\_\_\_ 2023 by and between the **DEPARTMENT OF EDUCATION**, located at DepEd Complex, Meralco Avenue, Pasig City, represented herein by its Undersecretary for Human Resource and Organizational Development, **GLORIA JUMAMIL-MERCADO**, as per Department Order No. 001, s. 2023, dated 09 January 2023 and Office Order OO-OSEC-2023-60, dated 14 March 2023 (hereinafter referred to as "**DEPED**"); and **NIKKA TRADING**, represented herein by its Authorized Representative, **JONATHAN R. ZULUETA**, with office address at Unit 1014 Cityland, Herrera Tower, V.A. Rufino Street cor. Valero Street, Salcedo Village, Makati City (hereinafter referred to as "**NIKKA**"), as per Omnibus Sworn Statement dated 17 January 2022 (hereto attached as Annex "A").

**DEPED** and **NIKKA** are collectively called **PARTIES**.

**WHEREAS, DEPED** invited bids for the mass production and supply of Science and Mathematics Equipment Packages consisting of 14 lots, and received bids from three (3) bidders for Lot No. 6; **DEPED** opened, read, and evaluated the bids and declared **NIKKA** as having the Lowest Calculated Bid for Lot No. 6; after evaluation, **DEPED** post-qualified and declared the bid of **NIKKA** as the Lowest Calculated Responsive Bid for Lot No. 6 in the sum of **PHILIPPINE PESOS TWO HUNDRED THIRTY-THREE MILLION, EIGHT HUNDRED TWENTY-EIGHT THOUSAND, FOUR HUNDRED NINETY-NINE AND 60/100 (PHP233,828,499.60) ONLY**, (hereinafter called the "Contract Price"), detailed as follows:

Lot No.	Description	Amount (PhP)
6 MI-SDIMT	SCIENCE DEVICES, INSTRUMENTS AND MEASURING TOOLS (MI-LOT 6)	233,828,499.60

**NOW THIS CONTRACT WITNESSETH AS FOLLOWS:**

1. In this Contract, words and expressions shall have the same meaning as are respectively assigned to them in the Conditions of Contract referred to.

*[Signature]*  
NIKKA's Witness

*[Signature]*  
JONATHAN R. ZULUETA  
NIKKA

*[Signature]*  
ARIZ DELSON ACAY D. CAWILAN  
DEPED's Witness

*[Signature]*  
GLORIA JUMAMIL-MERCADO  
DEPED



2. The following documents as required by the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184 shall be deemed to form and be read and construed as part of this Contract, viz:

a. Philippine Bidding Documents;

- i. General and Special Conditions of the Contract;
- ii. Schedule of Requirements; and
- iii. Technical Specifications;
- iv. Bid Bulletin No. 1 dated 29 December 2021, Bid Bulletin No. 2 dated 17 January 2022, Bid Bulletin No. 3 dated 21 January 2022, and Bid Bulletin No. 4 dated 27 January 2022;

b. **NIKKA's** bid, including the eligibility requirements, technical and financial proposals, and all other documents or statements submitted in accordance with the Bidding Documents;

c. Performance Security;

d. Notice of Award (NOA) of Contract and **NIKKA's** conforme thereto; and

e. Other contract documents required by existing laws and/or DepEd in the Bidding Documents. **NIKKA** agrees that additional contract documents of information prescribed by the Government Procurement Policy Board (GPPB) that are subsequently required for submission after the contract execution such as, but not limited to, Notice to Proceed, Variation Order, and Warranty Security, shall form part of the Contract.

3. **NIKKA** shall post a Performance Security within 10 calendar days from receipt of the NOA in the form and amount prescribed therein. The Performance Security shall be posted in favor of **DEPED**, and shall be forfeited in the event that it is established that **NIKKA** is in default of any of its obligations under this Contract. **NIKKA** shall be responsible for the extension of its performance security and/or undertake to renew its Performance Security whenever necessary, and without the need for prior notice of instruction from **DEPED**, to ensure that it is in force and effect for the whole duration of the Contract and until a Certificate of Final Acceptance is duly issued.

4. The goods referred to in this Contract must be ready for pick-up and hauling by the designated hauling service provider within **210 CALENDAR DAYS** from the receipt of the Notice to Proceed (NTP). **NIKKA** shall ensure that the goods to be picked up and hauled must be in accordance with the Schedule of Requirements, which is hereto attached as Annex "B" and made an integral part hereof.

5. **DEPED** shall have the right to visit and inspect **NIKKA's** premises covered by the Contract at any time or stage of the contract implementation to monitor and assess **NIKKA's** capacity to discharge its contractual obligations.

6. **DEPED** shall have the right to inspect and test or cause the testing of the goods covered by the Contract, at any time or stage of contract implementation. Prior to and for purposes of inspection, **NIKKA** shall

NIKKA's Witness

JONATHAN R. ZULUETA  
NIKKA

ARIZ DELSON ACAY D. CAWLAN  
DEPED's Witness

GLORIA JUMAMIL-MERCADO  
DEPED



ensure convenient access to the goods for inspection. **NIKKA** shall assign personnel to undertake the handling, unpacking, assembly, commissioning, disassembly, repacking, resealing, and sorting of the goods prior to, during, and after inspection.

7. The goods shall be inspected by the designated Inspectorate Team prior to pick-up and hauling from **NIKKA**'s warehouse in accordance with the provisions of the Special Conditions of the Contract, the Schedule of Requirements, or otherwise indicated in other parts of the Bidding Documents. **NIKKA** shall coordinate with **DEPED**, through the Procurement Management Service-Contract Management Division (ProcMS-CMD), on the conduct of inspection of goods. Any request for inspection shall be done in writing and contain the following information:
- a. Project Title and Contract Number;
  - b. Specific goods for inspection;
  - c. Quantity of goods for inspection;
  - d. Venue/Address of inspection site; and
  - e. Proposed schedule of inspection which must be at least 10 calendar days from the submission of the written request.

The request for inspection or PDI must be submitted to **DEPED** through ProcMS-CMD or by email at [procms.cmd@deped.gov.ph](mailto:procms.cmd@deped.gov.ph).

8. The goods must conform to and comply with the standards mentioned in Section VI. Schedule of Requirements of the Bidding Documents, and Technical Specifications under Section VII of the same document, which is hereto attached as Annex "C" and made an integral part hereof.

Any proposal by **NIKKA** to deliver goods of different technical specifications, in lieu of those indicated in Section VII. Technical Specifications of the Bidding Documents, shall not be allowed. However, under justifiable circumstances, *i.e.* fortuitous events, force majeure, acts of God, public state emergency, or those defined under the Civil Code and other similar circumstances, delivery of goods of equivalent, higher, or superior technical specifications may be permitted, subject to the evaluation and favorable recommendation of the **DEPED**'s end-user or implementing unit, and the approval of the herein authorized signatory. In any such case, the proposal by **NIKKA** for substitution shall be in writing and shall not result in any additional cost or undue burden to **DEPED**.

9. Title to the goods shall pass from **NIKKA** to **DEPED** after inspection and upon acceptance by the latter. After inspection and acceptance, **NIKKA** shall ensure that the goods are appropriately sealed and fit for hauling and transport. **NIKKA** shall also ensure convenient access to the goods for hauling.
10. The goods shall be picked up or hauled by the designated hauling service provider of **DEPED** within 90 calendar days after the date of inspection and acceptance as reflected in the Inspection and Acceptance Report (IAR). The said period is intended to provide **DEPED**, through the designated




hauling service provider, sufficient time to undertake the hauling of the goods.


However, during the 90-day intervening period, **NIKKA** shall retain the risks over the goods and have the residual obligation to ensure the safekeeping of the goods while the same are in its custody. **NIKKA** shall assume accountability over the goods until the pick-up or hauling of the same and the issuance of the Transfer Manifest by the designated hauling service provider.


Further, assembly, installation, start-up, and/or commissioning of goods, in cases where they are necessary, shall remain to be the responsibility and for the account of **NIKKA** notwithstanding inspection and acceptance at its warehouse or premises.


11. Goods with defects or non-compliant with the required technical specifications upon delivery shall be rejected, orally or in writing, by **DEPED** and replaced by **NIKKA** in accordance with the warranty provisions in the bidding documents. The replacement of the goods shall be subject to re-inspection.
12. In case **NIKKA** encounters condition(s) impeding timely delivery of the goods, **NIKKA** shall promptly notify **DEPED**, through the **Bureau of Learning Resources-Cebu (BLR-Cebu)**, in writing within five (5) calendar days from notice of such condition(s). Any request for work suspension and/or contract period extension shall be promptly done in writing as soon as circumstances justifying such request have become apparent. **NIKKA** must provide sufficient proof to support any request for work suspension and/or contract period extension.
13. The Contract Price shall be paid to **NIKKA** in accordance with the following disbursement procedures:
  - a. **NIKKA** may submit a request for payment based on the following:
    - i. **NIKKA**'s invoice showing goods' description, quantity, unit price, and total amount;
    - ii. Duly signed Delivery Receipts in sequential order of DR numbers (cumulative quantities of goods delivered based on the schedule of deliveries and other relevant terms and conditions of the Contract);
    - iii. Duly signed IARs, including certification by **NIKKA**, duly signed and dated by **DEPED**, through the authorized representative of BLR-Cebu, indicating that the goods have been delivered in accordance with the Contract; and
    - iv. Warranty Certificate.

Other documents in support of a request for payment may be required by **DEPED** pursuant to existing disbursement, accounting, and auditing rules and procedures.

  
NIKKA's Witness

  
JONATHAN R. ZULUETA  
NIKKA

  
ARIZ DELOSACAY D. CAVILAN  
DEPED's Witness

  
GLORIA JUMAMIL-MERCADO  
DEPED



NIKKA's Witness

JONATHAN R. ZULUETA  
NIKKA

ANZ DELSON ACAY D. CAWILAN  
DEPED's Witness

GLORIA JUMAMIL-MERCADO  
DEPED


- b. Payment shall be made to **NIKKA** within 60 days from submission of the documents specified in SCC Clause 2.2 and other documents as may be prescribed by **DEPED** in the following manner:
- i. For every progress payment, a minimum of 25% of the Contract Price shall be paid to **NIKKA** upon delivery of at least 25% of the goods and acceptance of the same by the duly authorized representative of **DEPED**;
  - ii. Final payment shall consist of the full and final payment of the unpaid inspected and accepted goods, subject to the submission of the required documents under the Bidding Documents.
14. Payment shall be subject to the "Warranty" provision in the form of either retention money in an amount equivalent to three percent (3%) of the progress payment or a Special Bank Guarantee in an amount equal to three percent (3%) of the Contract Price required under Section 62 of RA 9184 and its revised IRR.
- a. A one-year warranty for the goods shall reckon from the date of the issuance of the Certificate of Final Acceptance by **DEPED**.
  - b. In case **NIKKA** opts for retention money, the amount shall be released at the expiration of the warranty period or the remaining amount in case it has been utilized pursuant to the warranty provision unless, during the remainder of the warranty period, the retention money is substituted with a special bank guarantee.
15. Each party in the performance of their respective duties and responsibilities under this Contract and in the implementation thereof shall adhere to Republic Act No. 10173, otherwise known as the "Data Privacy Act of 2012." Any gathered data and information should be protected and respected during the term and even after the termination of this Contract. The processing of any gathered data and information should be in compliance with the confidentiality and privacy requirements under the said law and applicable regulations.
16. **NIKKA** shall be liable for liquidated damages in an amount equal to one-tenth (1/10) of one percent (1%) of the cost of the delayed goods scheduled for delivery, for every day of delay until such goods are finally delivered and accepted by **DEPED**. **DEPED** shall deduct the liquidated damages from any money due or which may become due to **NIKKA**, or collect from any of the securities or warranties posted by **NIKKA**, whichever is convenient to **DEPED**. Once the accumulated amount of liquidated damages reaches 10% of the Contract Price, **DEPED** may rescind or terminate the Contract, without prejudice to other courses of action and remedies available under the circumstances.
17. The **PARTIES** shall make every effort to resolve amicably and by mutual consultation any and all disputes or differences arising between the **PARTIES** in connection with the implementation of the Contract. Should such dispute not be resolved amicably, it shall be submitted to Early



Neutral Evaluation pursuant to Republic Act No. 9285 or the "Alternative Dispute Resolution Act of 2004", and its Implementing Rules and Regulations.

**IN WITNESS WHEREOF**, the **PARTIES** hereto have caused this Contract to be executed in accordance with governing laws on the day and year first above written.

SIGNED, SEALED AND DELIVERED BY:

  
**GLORIA JUMAMIL-MERCADO**  
Undersecretary for Human Resource  
and Organizational Development  
DEPED

  
**JONATHAN R. ZULUETA**  
Authorized Representative  
NIKKA

SIGNED IN THE PRESENCE OF:

  
**ARIZ DELSON ACAY D. CAWILAN**  
DEPED's Witness

  
NIKKA's Witness

CERTIFIED FUNDS AVAILABLE: ₱233,828,499.60

  
**M.A. RHUNNA L. CATALAN**  
Chief Accountant



REPUBLIC OF THE PHILIPPINES)  
PASIG CITY, METRO MANILA) S.S

**ACKNOWLEDGMENT**

**BEFORE ME**, a Notary Public in and for PASIG CITY,  
Philippines, this 05 SEP 2023 day of SEP 2023 personally appeared:

**NAME**  
  
**GLORIA JUMAMIL MERCADO**  
Undersecretary for Human Resource  
and Organizational Development  
DEPED


**GOVERNMENT ISSUED ID**  
(Number, Issued On, Issued By)  
P6519758A, 22 March 2018  
DFA Manila

Known to me and to me known to be the same person who executed the foregoing instrument and acknowledged to me that the same is the free and voluntary act and deed of the entity which he/she respectively represents.

The foregoing instrument is a CONTRACT consisting of six (6) pages (exclusive of attachments), excluding this page on which this acknowledgment is written and signed by the party hereto.

WITNESS MY HAND AND SEAL on the date and place first above written.

Doc. No. 137;  
Page No. 11;  
Book No. 122;  
Series of 2023.

  
**LETICIA M. AMON**  
Notary Public  
**NOTARY PUBLIC**  
Pasig, Pateros & San Juan  
Valid Until December 31, 2023  
Roll No. 22188  
PTR AA No. 0112306/01-03-23  
Lifetime IBP Member No. 04286  
Official Receipt No. 574709. IBP Chapter  
MCLE Compliance No. VII-0000050/6-18-2019  
Ground Flr. Armal Centre. U. Velasco, Ave.,  
Malinao, Pasig City

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REPUBLIC OF THE PHILIPPINES)  
**MAKATI CITY**, METRO MANILA) S.S

**ACKNOWLEDGMENT**

**BEFORE ME**, a Notary Public in and for **MAKATI CITY**, Philippines, this \_\_\_\_ day of AUG 30 2023 2023 personally appeared:

**NAME**  
**JONATHAN R. ZULUETA**  
Authorized Representative  
NIKKA

**GOVERNMENT ISSUED ID**  
(Number, Issued On, Issued By)

P6219471A, FEBRUARY 28, 2018  
DFA NCR WEST

Known to me and to me known to be the same person who executed the foregoing instrument and acknowledged to me that the same is the free and voluntary act and deed of the entity which he/she respectively represents.

The foregoing instrument is a CONTRACT consisting of six (6) pages (exclusive of attachments), excluding this page on which this acknowledgment is written and signed by the party hereto.

WITNESS MY HAND AND SEAL on the date and place first above written.

Doc. No. 282;  
Page No. 95;  
Book No. 32;  
Series of 2023.



NOTARY PUBLIC

**ATTY. SHERLUCK JUN C. VILLEGAS**

Notary Public for Makati City  
Appt. No. M-274 until Dec. 31, 2024  
Unit 3C LTA Building, 118 Perea St.  
Legaspi Village, Makati City  
Roll No. 70942  
IBP No. 180225/ 11-22-2022/ Pasig City  
PTR No. 8583991 / 01-17-2021/ Makati City  
MCLE Compliance No. VII-0020869/April 14, 2025

Handwritten initials or signature.



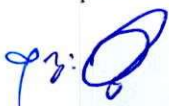
## Omnibus Sworn Statement (Revised)

REPUBLIC OF THE PHILIPPINES)  
CITY/MUNICIPALITY OF **MAKATI**) S.S.

### AFFIDAVIT

I, **JONATHAN R. ZULUETA**, of legal age, married, Filipino, and residing at Lot 5 Block 4 Scienceville, Betterliving, Parañaque City, after having been duly sworn in accordance with law, do hereby depose and state that:

1. I am the authorized representative of **Andronica T. Roma**, doing business under the name and style of **Nikka Trading**, with office address at Unit 1014 Cityland Herrera Tower V. A. Rufino St. cor. Valero St., Salcedo Village, Makati City;
2. As the authorized representative of **Nikka Trading/Andronica T. Roma**, I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for **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 Schools for Grades 11 to 12 (CORE & STEM)** of the **Department of Education (DepEd)**, as shown in the attached duly notarized Special Power of Attorney;
3. **Nikka Trading/Andronica T. Roma** is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;
4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;
5. **Nikka Trading/Andronica T. Roma** is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;
6. The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;
7. **Nikka Trading/Andronica T. Roma** complies with existing labor laws and standards; and
8. **Nikka Trading/Andronica T. Roma** is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:
  - a. Carefully examining all of the Bidding Documents;
  - b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
  - c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
  - d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the **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 Schools for Grades 11 to 12 (CORE & STEM)**.
9. **Nikka Trading/Andronica T. Roma** did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

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10. In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.

IN WITNESS WHEREOF, I have hereunto set my hand this JAN 17 2022 day of January 2022 at Makati City, Philippines.

**JONATHAN R. ZULUETA**  
Authorized Representative/Affiant

JAN 17 2022  
SUBSCRIBED AND SWORN to before me this \_\_\_\_ day of January 2022 at Makati City, Philippines. Affiant known to me, and known to be the same person in the exhibited his Passport No. P6219471A valid until February 27, 2028 with his photograph and signature appearing thereon, issued on February 28, 2018 at DFA NCR.

JAN 17 2022  
Witness my hand and seal this \_\_\_\_ day of January 2022.

NAME NOTARY PUBLIC \_\_\_\_\_  
Serial No. Of Commission \_\_\_\_\_  
Notary Public for \_\_\_\_ until \_\_\_\_\_  
Roll of Attorney's No. \_\_\_\_\_  
PTR No. \_\_\_\_\_  
IBP No. \_\_\_\_\_

Doc. No. 32  
Page No. 8  
Book No. 3  
Series of 2022.



**SHERLUCK JUN C. VILLEGAS**  
Notary Public for Makati City  
Appl. No. M-260 until Dec 31, 2022  
Unit 3C LTA Building, 118 Perea St.  
Legaspi Village, Makati City  
Roll No. 70942  
IBP No. 155267 / 09-03-2021 / Pasig City  
PTR No. 8852016 / 01-03-2022 / Makati City  
MCLE Compliance No. VI-0028223/August 13, 2019

*[Handwritten signature]*




## SCHEDULE OF REQUIREMENTS

**List/Description of Goods /Services**

The delivery schedule expressed below stipulates the date upon which the goods are ready for pick-up or hauling at the supplier's warehouse.

Lot No.	Item No.	Description	Total Quantity	Delivery Period
<b>Mass Production Items</b>				
6	1	Anemometer with Wind Vane, Cup type	5,962	<b>210 Calendar Days from the receipt of NTP</b>
	2	Anemometer, Simple	2,981	
	3	Aneroid Barometer Set (Demonstration Type)	31,015	
	4	Aneroid Barometer, wall-mount	6,203	
	5	Balance, Triple Beam, with tare, 2610-gram	16,110	
	6	Calorimeter	640	
	7	Compass, Magnetic	8,950	
	8	Dissecting Set with pan	640	
	9	Filter Paper, crepe, 580mm x 580 mm sheet, Grade 0905	17,900	
	10	First Aid Kit	1,790	
	11	Gloves, Hand, super nitrile	14,905	
	12	Gloves, Surgical	1,280	
	13	Graduated Cylinder, borosilicate, 10 mL	8,950	
	14	Graduated Cylinder, borosilicate, 100 mL	8,950	
	15	Graduated pipette with rubber pipettor, borosilicate, 10 mL	640	
	16	Hand Lens, 10x magnification	3,875	
	17	Hand Lens, 5x magnification	15,545	
	18	Hexagonal Weigh Dishes Set, 50mL, 500 pcs/pack	2,981	
	19	Hydrometer for heavy liquids	640	
	20	Hydrometer for light liquids	640	
	21	Lens Paper, 50's/pack	16,110	
	22	Microscope, Compound with 4 Objectives	64,440	
	23	Prepared Slide Set, Microscope, 25 pieces	3,997	
	24	Prepared Slide Set, Mitosis and Meiosis	3,222	
	25	Reaction Plates with 6 Wells	19,985	
	26	Safety Goggles, polycarbonate	34,890	
	27	Sedimentator Tube	3,875	
	28	Sling Psychrometer	8,950	
	29	Soil/Test Sieve*	1,790	
	30	Wash Bottle, plastic, 250 mL	34,890	
<b>TOTAL</b>			<b>342,746</b>	

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TECHNICAL SPECIFICATIONS

Item	Description	Specifications
<b>DETAILED PRODUCT SPECIFICATIONS (MARKET ITEMS)</b>		
<b>LOT 6: SCIENCE DEVICES, INSTRUMENTS, AND MEASURING TOOLS</b>		
1	<b>Anemometer with Wind Vane, Cup type</b>	<p><b>Functional Specifications:</b> Used to measure wind speed in real-time and indicate the direction where the wind is coming from and where it is heading</p> <p><b>Performance Specifications:</b> Should be able to measure wind speed in real-time and indicate the direction where the wind is coming from and where it is heading</p> <p><b>Design Specifications:</b></p> <ol style="list-style-type: none"> <li>1. Anemometer and wind vane combined in 1 unit</li> <li>2. Minimum Dimension of unit: 350 mm x 80 mm x 80 mm (H x W x D)</li> <li>3. Powered by AA or AAA dry cells</li> <li>4. Direct digital reading of wind speed, can display wind speed in m/s and km/hr, can measure average wind speed and instantaneous wind speed by means of selector switch</li> <li>5. Wind vane should be free moving to indicate wind direction, wind vane should have arrow head on one end and arrow tail on the other end</li> <li>6. Made of corrosion resistant material</li> <li>7. All labels, inscriptions, and instructions should be in English</li> <li>8. The item should be free from toxic materials</li> <li>9. The item should be branded</li> </ol>
2	<b>Anemometer, Simple</b>	<p><b>Functional Specifications:</b> Used to determine wind speed by calculating the number of rotations the rotor makes per unit time</p> <p><b>Performance Specifications:</b> Should be able to determine wind speed by calculating the number of rotations the rotor makes per unit time</p> <p><b>Design Specifications:</b></p> <ol style="list-style-type: none"> <li>1. Sensitive/low friction model for demonstrating the principle of wind velocity. Can rotate with human blow</li> <li>2. Made of corrosion-resistant material</li> <li>3. Consist of 4 cups (5 cm diameter) mounted on a hub and on an axle securely affixed to a tough and stable base. 3-cups are colored black with one red cup (or any bright colors) to facilitate counting of rotations.</li> <li>4. Minimum Dimension: 220 mm x 160 mm (H X W)</li> <li>5. With No Removable Parts</li> <li>6. All labels and inscriptions should be in English</li> <li>7. The item should be free from toxic materials</li> <li>8. The item should be branded</li> </ol>
3	<b>Aneroid Barometer Set (Demonstration Type)</b>	<p><b>Functional Specifications:</b> Used to demonstrate how an aneroid barometer works</p> <p><b>Performance Specifications:</b> Should be able to demonstrate how an aneroid barometer works</p> <p><b>Design Specifications:</b></p> <ol style="list-style-type: none"> <li>1. The unit is supplied with rubber compression bulb with tube, changes in pressure can be demonstrated and obtained by compressing the rubber bulb</li> <li>2. Dual graduation: mmHg and mbar(hPa).</li> <li>3. Range: 960 to 1060 mbar with mmHg equivalent</li> <li>4. Dial Diameter: minimum of 100 mm</li> <li>5. With English User's manual that includes the operation and reset procedure.</li> </ol>

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		6. Must be branded
4	<b>Aneroid Barometer, wall-mount</b>	<b>Functional Specifications:</b> Used to measure the prevailing atmospheric pressure in a locality in real time
		<b>Performance Specifications:</b> Should be able to measure the prevailing atmospheric pressure in real time
		<b>Design Specifications:</b>
		1. Range: 960 mbar to 1060 mbar
		2. Dual graduation: mmHg and mbar(hPa)
		3. Dial Diameter: 100 mm to 130 mm
		4. Materials: plated bezel, scratch-free cover glass, and plastic base
		5. Shock resistant, heat resistant
		6. With English User's manual that includes the operation and reset procedure.
		7. Must be branded
5	<b>Balance, Triple Beam, with tare, 2610-gram</b>	<b>Functional Specifications:</b> To measure mass of solids, liquids and gases accurate up to 0.1 g readability
		<b>Performance Specifications:</b> Must be able to measure mass of solids and liquids accurate up to 0.1 g readability to determine mass relationship in a chemical reaction
		<b>Design Specifications:</b>
		1. Shape: Features magnetic damping, three graduated-tier beam with pan
		2. Display: Easy-to-read deep-notched, tiered beams and dial plates
		3. Material of weighing pan: Stainless Steel
		4. Shape of weighing pan: Circular
		5. Pan size: 150 mm diameter
		6. Material of base : Cast metal with corrosion-resistant finish
		7. Material of main beam: Aluminum alloy
		8. With spring, loaded zero-adjust compensator
		9. With self-aligning agate bearings, precision ground steel knife edges
		10. With magnetic dampening to minimize oscillation and speed weighing,
		11. With adjustment knob for taring
		12. With iron stand assembly (stand rod and C clamp) for fastening on the table and suspending the triple beam balance on air for specific gravity determination
		13. Capacity: 2610grams
		14 Accuracy: 0.1 gram readability
		15. With three beam graduations:
		a) Rear beam: 100 g X 10 g
		b) Center beam: 500 g X 100 g
c) Front beam: 10 g X 0.1 g		
16. Equipped with three separate masses:		
a) 2 pc 1,000 grams counter weights		
b) 1-pc 500 grams counter weight		
17. Manufacturer of the country of origin should issue certificate of calibration for every item.		
18. With English User's manual that contains Operation guide and also indicates formula and procedure in determining specific gravity and taring.		
19. Comes with training on the use, care, proper storage, repair and maintenance with trouble shooting (please refer to Quality Assurance Procedure during Contract Implementation on the details).		

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		20. For durability and sensitivity, parts should be able to withstand environment/solutions.
		21. Enclosed in polystyrene and packed in a sturdy box
		22. Comes with a brand with five (5) years existence in the weighing industry
6	<b>Calorimeter</b>	<p><b>Functional Specifications:</b> Used to measure heat effects or heat of reactions</p> <p><b>Performance Specifications:</b> a) Must be able to measure the heat effects or heat of reactions, the heat of neutralization of an acid and heat of fusion in the laboratory b) to distinguish between exothermic and endothermic processes</p> <p><b>Design Specifications:</b></p> <p>1. Type: Double-walled</p> <p>2. Shape: Cylindrical double wall with air insulation between two polished spun vessels</p> <p>3. Material: Two polished spun aluminum vessels with the following dimensions:</p> <p>A) Outer vessel size:</p> <p>a) Height: 139-152 mm</p> <p>b) Depth: 100-102 mm</p> <p>c) Capacity: 300 mL</p> <p>B) Inner vessel size:</p> <p>a) Height: 80-89 mm</p> <p>b) Depth: 63-77 mm</p> <p>c) Capacity: 100-200 mL</p> <p>4. Accessories:</p> <p>a) With a plastic insulator ring or fiber washer for insulating and supporting one vessel within the other, protects the styrofoam insulation against damage and liquid spills.</p> <p>b) Insulated Stirrer</p> <p>c) A clear transparent molded cover or plastic lid with a filler cap, with two holes (one hole is for the rubber stopper that holds the thermometer and the other hole for the stirrer</p> <p>d) Rubber stopper with one hole</p> <p>e) With 17 mm thick styrofoam liner /sleeve to insulate the inner vessel</p> <p>5. With Instruction Manual in English that contains precise instructions on how to conduct common calorimetry experiments.</p> <p>6. With User's Manual on the use, care, maintenance, trouble shooting and proper storage in English</p> <p>7. With Activity Sheets/Teachers Manual in English</p> <p>8. For numbers #5 to 7; technical specifications a-e must be followed:</p> <p>a) For Contents List of materials, In Table form</p> <p>b) for User's Manual, 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) Margins on all sides with 2 point width border line</p>

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		v) Line with arrow head of 1.25 point with width shall point to the specific part being labeled
		7. Comes with a brand
7	<b>Compass, Magnetic</b>	<b>Functional Specifications:</b> Used to find direction on the earth's surface by the alignment of the compass needle with the earth's magnetic field
		<b>Performance Specifications:</b> Should be able to find direction on the earth's surface by the alignment of the compass needle with the earth's magnetic field
		<b>Design Specifications:</b>
		1. Outside Diameter: 48 mm to 52 mm
		2. Needle mounted in an Aluminum case with clear, scratch-free plastic or glass face
		3. Graduated dial marked in cardinal points (North, South, West, East, Northwest, Northeast, Southwest, and Southeast).
		4. Must be branded
8	<b>Dissecting Set with pan</b>	<b>Functional Specifications:</b> Used to perform a wide variety of dissections.
		<b>Performance Specifications:</b> Must be able to aid in classifying different animal tissues during dissection.
		<b>Design Specifications:</b>
		1. 10 pc dissection set that includes the following stainless steel instruments:
		• 1-piece surgical scissors, min. length 110mm;
		• 1-piece fine point/iris scissors, min. length 110mm;
		• 1-piece fine point curved forceps, min. length 110mm;
		• 1-piece fine point straight tip forceps, min. length 110mm ;
		• 1-piece tissue forceps/mosquito forceps, curved tip
		• 1-piece scalpel 4 cm blade
		• 1-piece scalpel handle
		• 1-piece teasing needle angular with chuck
		• 1-piece teasing needle straight with chuck
		• 1-piece mall probe and seeker
		2. In a rectangular leatherette pouch or vinyl zippered case;
		3. With 1-piece stainless steel dissecting pan (min.) of 11 inches x 7 inches x 1 -1/2inches
		4. "Stainless steel" shall be embossed or engraved on the items
9	<b>Filter Paper, crepe, 580mm x 580 mm sheet, Grade 0905</b>	<b>Functional Specifications:</b> Used to filter/separate mixtures solids from liquids
		<b>Performance Specifications:</b> Must be able to filter solids from liquids to demonstrate filtration, as one of the techniques in separating mixtures (solids from liquids)
		<b>Design Specifications:</b>
		1. Type: Technical use
		2. Shape of filter paper: Square
		3. Material: Cellulose with the following dimensions:
		a) Length: 580 mm (minimum)
		b) Width: 580 mm (minimum)
		4. Color: White to cream
		5. Grade: 0905
		6. Surface: Creped
		7 Initial Filtration Speed: 20 sec (± 1 sec)/ 10 mL; Flow rate: High

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		8. Wet strengthened
		9. Packed in brown filter paper tube
		10. Comes with a brand
10	First-Aid Kit	<b>Functional Specifications:</b> Used to provide immediate medical help in an emergency.
		<b>Performance Specifications:</b> Must be able to treat minor illnesses and injuries in an emergency.
		<b>Design Specifications:</b>
		1. First Aid Quick Reference Guide in English, 1pc
		2. Sterile Gauge Swab (4in. x 4in. x12 ply), 100 pcs./pack, 1 pack
		3. Adhesive strips/Band-Aid, 50 pcs/pack, 2 packs
		4. Gloves, disposable, size # 7.5 - # 8.5, 2 pairs
		5. Hypoallergenic adhesive tape, 5cm x 5m, 2 rolls
		6. Triangular bandage/arm sling, 90cm x 90cm x 120cm, 2pcs
		7. Safety pins, 1- 1/4 inches (12 pcs), 1- 3/4 inches (12 pcs)
		8. Stainless steel bandage scissors, 2pcs
		9. Betadine, 60ml, 2 bottles
		10. Dust mask, 2pcs
		11. Hand towels or face towels, white color, 6 pcs
		12. Gauze bandage, (min.): 5cm x 4m, 2 rolls
		13. Antiseptic handwash/germicidal soap, 60 gms, 2pcs
		14. Tourniquet, 2 pcs
		15. Spirit of ammonia, 30ml, 1 bot.
		16. Burn cream ointment, 20g to 30g, 1 tube
		17. Medical tweezers min. 8cm, plastic , 2pcs
		18. Plastic bags, resealable, minimum of 24pcs, 100mmx180mm, 24pcs; 150mmx230mm
		19. Cotton balls , 50 balls in a sealed package, 2 packs
		20. Hot and Cold pack, reusable, 1 pack
		21. Water resistant, sturdy case with handle that can accommodate all of the above listed items.
		22. Expiration dates of Betadine, Ammonia and Burn ointment shall be at least two years after pre-delivery inspection.
		23. All items must be branded and have quality Control markings (local/international)
11	Gloves, Hand, super nitrile	<b>Functional Specifications:</b> Used to protect hands against mechanical risks, microorganisms, chemical burns and splashes
		<b>Performance Specifications:</b> Must be able to protect hands against mechanical risks, microorganisms, chemical burns and splashes
		<b>Design Specifications:</b>
		1. Shape: Slightly curved fingers and forward-facing thumb correspond to the natural position of the hand (hand-shaped) ,
		2. Material: Super nitrile, reusable with the following dimensions:
		a) Length of gloves : 13 inches (330.2 mm ) min
		b) Thickness: 0.38 -0.52 mm (min)
		3. Color : Green
		4. Size: 8
		5. Interior finish : Flock lined interior(acid/solvent resistant)
		6. Exterior finish : Smooth
		7. Cuff type: Rolled beaded
		8. Latex free to suit those with latex allergies
		9. Non-slip wear resistant high elasticity , waterproof



		10. Puncture resistant
		11. With detailed imprints on each glove, on the following:
		a) the glove size/s
		b) the name of manufacturer
		c) nitrile, flock lined
		d) individual manufacturing lot
		e) with pictograms for certification category requirements CE 0334 (EN 420, EN 388, EN 374) designed for protection against mechanical risks, chemical risks, and micro-organisms
		12. Individually packed in resealable plastic bag
		13. Comes with a brand
12	Gloves, Surgical	<b>Functional Specifications:</b> Used to protect hands from dirt and contamination.
		<b>Performance Specifications:</b> Must be able to protect hands against dirt, laceration and contamination.
		<b>Design Specifications:</b>
		1. Sterile, latex surgical gloves for single use
		2. Smooth, powder-free and beaded cuff
		3. Material: Natural Latex Rubber
		4. Color: White or beige
		5. Size: #7.5 to #8.5
		6. Thickness: 6 to 7 mil (0.15 - 0.18 mm)
		7. Individually sealed pack pair of gloves
		8. Quantity: 50 pairs/box
13	Graduated Cylinder, borosilicate, 10 mL	<b>Functional Specifications:</b> Used to measure and to deliver the volume of liquids
		<b>Performance Specifications:</b> Must be able to measure and to deliver the volume of liquids up to 10 mL capacity
		<b>Design Specifications:</b>
		1. Type: Class A
		2. Shape: Narrow cylindrical container with a small turned-out lip
		3. Material: Borosilicate, clear and transparent bubble-free, glass with the following dimensions:
		a) Outside Diameter: 13-14 mm
		b) Height: 177-178 mm
		c) Thickness range: 1.3-1.4 mm
		d) Tolerance: $\pm 0.20$
		4. Capacity: 10 mL
		5. Graduation Range: 1 to 10 mL
		6. Graduation interval: 0.1 mL
		7. Calibrated to deliver (TD)
		8. All markings are in permanent white enamel
		9. With pouring spout
		10. Single metric scale, with plastic bumper guard
		11. Glass hexagonal base (non-detachable)
		12. Manufacturer of the country of origin should issue certificate of calibration for every item.
		13. Placed in bubble wrap, and packed individually in a compartmentalized box
		14. Must be free from breakage, cracks, and sharp rim
		15. Comes with a brand, with five (5) years of existence in the glasswares industry

Handwritten signature or initials.



14	<b>Graduated Cylinder, borosilicate, 100 mL</b>	<p><b>Functional Specifications:</b> Used to measure and to deliver the volume of liquids</p> <p><b>Performance Specifications:</b>  a) Must be able to measure and to deliver the volume of liquids up to 100 mL capacity  b) Used as a container to determine the volume of irregularly shaped solids by water displacement</p> <p><b>Design Specifications:</b>  1. Type: Class A  2. Shape: Narrow cylindrical container with a small turned-out lip  3. Material: Bubble-free, borosilicate, clear and transparent glass with the following dimensions:  a) Outside Diameter: 29-31 mm  b) Height: 254-256 mm  c) Thickness range: 1.3-1.4 mm  d) Tolerance: <math>\pm 0.60</math> mL  4. Capacity: 100 mL  5. Graduation range: 5 to 100 mL  6. Graduation Interval: 1 mL  7. Calibrated to deliver (TD)  8. All markings are in permanent white enamel  9. With pouring spout  10. With single graduated metric scale with plastic bumper guard  11. With glass hexagonal base (non-detachable)  12. Manufacturer of the country of origin should issue certificate of calibration for every item.  13. Placed in bubble wrap, and packed individually in a compartmentalized box  14. Must be free from breakage, cracks and sharp rim  15. Comes with a brand, with five (5) years existence in the glass industry</p>
15	<b>Graduated pipette with rubber pipettor, borosilicate, 10 mL</b>	<p><b>Functional Specifications:</b> Used to measure the amount of liquid being dispensed/delivered/ transferred to another container accurate up to 10 mL capacity</p> <p><b>Performance Specifications:</b> Must be able to measure the amount of liquid being dispensed/ delivered/transferred to another container accurately up to 10 mL capacity</p> <p><b>Design Specifications:</b>  1. Type: Serological, transfer type  2. Shape: Straight tube with one constricted end  3. Material: Borosilicate, reusable, clear, transparent bubble-free glass  4. Marked "TD" - To deliver  5. Graduated to tip, zero at top  6. Color code for 10 mL cap : Orange  7. Top end is constricted  8. Capacity: 10 mL  9. Graduation interval: 0.1 mL  10. Tolerance: <math>\pm 0.06</math> mL  11. Graduation is in descending scale  12. Graduations, approximate volumes, capacity, and other markings are in a permanent amber stain which resists aggressive washing solutions</p>

Handwritten signature or initials in blue ink.



		<p>13. Manufacturer of the country of origin should issue certificate of calibration for every item.</p> <p>14. Accessory: With Rubber pipettor</p> <p>a) Type: Three (3) -way Safety Bulb-type Pipet Filler</p> <p>b) Material: Non-toxic natural rubber</p> <p>c) Color: Red/orange</p> <p>d) With pinch release valves that control air evacuation, liquid uptake, and liquid dispensing</p> <p>e) Fits standard size pipettes</p> <p>15. Packaging: Wrap glassware in newspaper and secure with a piece of masking tape and place in a bubble pouch, enclosed in polystyrene and packed in sturdy box</p> <p>16. Comes with a brand, with five (5) years existence in the glasswares industry</p>
16	<b>Hand Lens, 10x magnification</b>	<p><b>Functional Specifications:</b> Used for enlarging the appearance of objects 10 times its actual size</p> <p><b>Performance Specifications:</b> Should be able to enlarge the appearance of objects 10 times its actual size</p> <p><b>Design Specifications:</b></p> <ol style="list-style-type: none"> <li>1. Magnification: x 10</li> <li>2. Diameter (viewable area) 21 mm</li> <li>3. Body: Stainless steel</li> </ol>
17	<b>Hand Lens, 5x</b>	<p><b>Functional Specifications:</b> Used to produce a magnified image of an object.</p> <p><b>Performance Specifications:</b> Must be able to magnify the image of an object.</p> <p><b>Design Specifications:</b></p> <ol style="list-style-type: none"> <li>1. Five times (5x) magnification power</li> <li>2. Shall have a focal length not greater than 60 mm</li> <li>3. Glass lens diameter: 50 mm (±1 mm)</li> <li>4. Mounted in a circular metal frame with a cylindrical handle</li> <li>5. No sharp edges</li> <li>6. Safely packed in a box</li> </ol>
18	<b>Hexagonal Weigh Dishes Set, 50mL, 500 pcs/pack</b>	<p><b>Functional Specifications:</b> Used for containment of relatively small amount of solid or liquid specimens for weighing</p> <p><b>Performance Specifications:</b> Should be able to contain relatively small amount of solid or liquid specimens for weighing</p> <p><b>Design Specifications:</b></p> <ol style="list-style-type: none"> <li>1. Made of hexagonal shapes plastic</li> <li>2. Easily bent into pouring spouts to facilitate in sample transfers and reduce the risk of spills.</li> <li>3. Ideal for handling solids or liquids during weighing procedures.</li> <li>4. Flat bottoms and sloping sides allow these disposable dishes to be easily stacked and conveniently stored.</li> <li>5. Must be branded</li> </ol>
19	<b>Hydrometer for heavy liquids</b>	<p><b>Functional Specifications:</b> Used to measure relative density of heavy liquids based on the concept of buoyancy</p> <p><b>Performance Specifications:</b> Must be able to measure relative density of heavy liquids based on the concept of buoyancy, like glycerine</p> <p><b>Design Specifications:</b></p>

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		<p>1. Type: Long Plain Form</p> <p>2. Shape: Long cylindrical hollow glass tube with a bulb weighted at the bottom with a steel ballast with graduations on the narrow stem for measuring</p> <p>3. Material: Glass, with the following dimensions:</p> <p>a) Length: 300 - 330mm</p> <p>b) Tolerance: <math>\pm 0.01</math></p> <p>4. Specific Gravity Range: 1.00 - 2.00</p> <p>5. Subdivision: 0.01</p> <p>6. Comes with a ballast</p> <p>a) Material of ballast: Glass</p> <p>b) Heavy metals (lead, mercury)- free metal ballast</p> <p>c) Material inside the ballast: Steel pellets and</p> <p>d) With a binder</p> <p>7. Individually serialized</p> <p>8. Manufacturer of the country of origin should issue certificate of calibration for every item.</p> <p>9. Individually packed in a protective hard plastic case</p> <p>10. With User's Manual in English</p> <p>11. With Activity Sheets/Teacher's Manual in English</p> <p>12. For numbers #10 to 11; the technical specifications a-e must be followed:</p> <p>a) For Contents List of materials, In Table form</p> <p>b) for User's Manual, 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) Margins on all sides with 2-point width border line</p> <p>v) Line with arrow head of 1.25 point with width shall point to the specific part being labeled</p> <p>13. Must be free from breakage, cracks and sharp parts</p> <p>14. Must have a brand</p>
20	Hydrometer for light liquids	<p><b>Functional Specifications:</b> Used to measure relative density of light liquids based on the concept of buoyancy like water</p> <p><b>Performance Specifications:</b> Must be able to measure the relative density of liquids lighter than water based on the concept of buoyancy</p> <p><b>Design Specifications:</b></p> <p>1. Type: Long Plain Form</p> <p>2. Shape: Long cylindrical hollow glass tube with a bulb weighted at the bottom with a steel ballast with graduations on the narrow stem for measuring</p> <p>3. Material: Glass, with the following dimensions:</p> <p>a) Total Length: 300 - 330 mm</p> <p>b) Graduated scale length: 305 mm</p> <p>c) Subdivision: 0.005</p> <p>d) Tolerance: <math>\pm 0.005</math></p>

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		<p>4. Specific Gravity Range: 0.70 to 1.0</p> <p>5. Accuracy: ±1 subdivision</p> <p>6. Comes with a ballast</p> <p>a) With heavy metals (lead, mercury)- free metal ballast and glass</p> <p>b) Material inside the ballast: Steel pellets and</p> <p>c) With a binder</p> <p>7. Individually serialized</p> <p>8. Manufacturer of the country of origin should issue certificate of calibration for every item.</p> <p>9. Individually packed in a protective hard plastic case</p> <p>10. With User's Manual in English</p> <p>11 With Activity Sheets/Teacher's Manual in English</p> <p>12.For For numbers #10 to 11; the technical specifications a-e must be followed:</p> <p>a) For Contents List of materials, In Table form</p> <p>b) For User's Manual, 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) Margins on all sides with 2-point width border line</p> <p>v) Line with arrow head of 1.25 point with width shall point to the specific part being labeled</p> <p>13. Must be free from breakage, cracks and sharp parts</p> <p>14. Must be free from breakage, cracks, chipped and sharp parts</p> <p>15 Must have a brand</p>
21	<b>Lens Paper, 50's/pack</b>	<p><b>Functional Specifications:</b> Used to clean the microscope lenses.</p> <p><b>Performance Specifications:</b> Must be able to clean the microscope lenses.</p> <p><b>Design Specifications:</b></p> <p>1. Measures 4inches x 6inches (101.6mm ± 1mm x 152.4mm ± 1mm)</p> <p>2. Shape: rectangular</p> <p>3. Material: Fine, soft, lint-free paper</p> <p>4. Quantity: 50 sheets/pack</p> <p>5. Must be packed by 5 packs/set in a resealable plastic</p>
22	<b>Microscope, Compound, 4 Objectives</b>	<p><b>Functional Specifications:</b> Used to view specimen not visible to the naked eye.</p> <p><b>Performance Specifications:</b> Must be able to focus specimen not visible to the naked eye using the four objectives.</p> <p><b>Design Specifications:</b></p> <p>1. Eyepiece: Glass lens, locked-in wide field, 10X with pointer, and with own separate plastic storage case includes an extra 15X eyepiece</p> <p>2. Nosepiece: Quadruple with accurate centering and click stops; easy to turn</p>

Handwritten signature or initials in blue ink.



		<p>3. Objectives: With metal casing, glass lens, DIN achromatic objectives are parfocal, par centered, color coded, 4x, 10x; retractable 40x, and 100x (oil immersion) with own separate plastic storage case</p> <p>4. Stage: Built in flat, firmly fixed graduated mechanical stage clips and with knobs; 120 mm x 120 mm (<math>\pm 10</math>mm); glass slides should not be displaced when mounted</p> <p>5. Condenser: N.A. 1.25 with iris diaphragm</p> <p>6. Focus: Dual coarse controls with slip clutch and adjustable tension ring; dual lever type fine focus controls; adjustable safety stop; Gives sharp, clear, well-lighted images</p> <p>7. Mirror: 50mm (<math>\pm 1</math> mm), 2-sided, plane-concave</p> <p>8. No sharp metal parts</p> <p>9. With wooden storage case; and immersion oil provided</p> <p>10. With User's Manual that shall provide the diagram of correct microscope parts; function of each part; operation guide; cleaning and troubleshooting instructions.</p> <p>11. Manual details:</p> <p>a. Material: Inside pages: 70 lbs Book Paper, 103-105 gsm; Cover: Paper board, Foldcote solid Cal#15, 282gsm</p> <p>b. Size: 6.5 inches x 8.5 inches Fold 13 inches x 8.5 inches Spread</p> <p>c. Binding: Saddle Staple</p> <p>d. Font type: Arial and Font size (min.): 10</p> <p>e. Written in American English with correct grammar, spelling and punctuation.</p> <p>f. Pictures used must be in full color</p> <p>12. Comes with training video in USB on the use, care, and maintenance (please refer to Quality Assurance Procedure during Contract Implementation on the details).</p> <p>13. Warranty on parts and labor: 2 years</p>
23	Prepared Slide Set, Microscope, 25's	<p><b>Functional Specifications:</b> Used to contain the readily mounted and ready to view object/specimen for examination under a microscope.</p> <p><b>Performance Specifications:</b> Must be able to show the specimen when viewed under a microscope.</p> <p><b>Design Specifications:</b></p> <p>1. Quantity: Set of 25 pieces glass slides</p> <p>2. Dimensions (Width x Length): 25 mm x 75 mm (<math>\pm 0.5</math> mm);</p> <p>3. Thickness: 1.1 mm (<math>\pm 0.05</math> mm)</p> <p>4. Individually sealed and protected by a cover slip/glass cover;</p> <p>5. Colorful slides of the following: insects (4); plants (7); animals/microbes (7); Human tissues (7)</p> <p>6. Either of the following insects: wing of housefly, mosquito larvae, <i>Drosophila melanogaster</i>, housefly head, aphids.</p> <p>7. Either of the following plants: <i>Volvox</i>, stem of monocotyledon c.s, stem of dicotyledon c.s., monocot leaf epidermis, dicot leaf epidermis, germinated pollen, <i>Hydrilla</i> leaf w.m.</p> <p>8. Either of the following animals/microbes: Hydra budding, <i>Euglena</i>, diatoms, <i>Daphnia</i> w.m., <i>Amoeba proteus</i>, <i>Paramecium</i> w.m., <i>Planaria</i> w.m., <i>Planaria</i> c.s., <i>Ascaris</i> mitosis, <i>Vorticella</i>, lancelet w.m., <i>Escherichia coli</i>, <i>Staphylococcus aureus</i>, <i>Lactobacillus</i> spp.</p> <p>9. Either of the following human tissues: skeletal muscle c.s., small intestine c.s., human white blood cell, cardiac muscle; motor neurons cell w.m., spinal cord c.s., lung section, liver section, nerve cell w.m., meiosis of human sex cells, stomach villi</p> <p>10. Writing the scientific name with correct spelling shall be properly observed.</p> <p>11. Individually labeled for specimen identification</p>

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		12. Slides are packed in a fitted wooden box that contains interior padding to prevent breakage
		13. Clear, no finger-smudged and no chipped edges slide
		14. Includes instructions on how to clean and properly store the slide in coated paper-glossy finish (105 mm x 140 mm), Font style: Arial, Font size: 10, written in American English with correct grammar, spelling and punctuation.
24	<b>Prepared Slide Set, Mitosis &amp; Meiosis</b>	<b>Functional Specifications:</b> Used to guide students through the events of cell division.
		<b>Performance Specifications:</b> Must be able to compare mitosis and meiosis, and their role in the cell-division cycle.
		<b>Design Specifications:</b>
		1. A set of 6 rectangular microscope glass slides with polished edges
		a. <i>Ascaris megalocephala</i> embryology. Sec. of uteri showing maturation stages (meiosis). Polar bodies can be seen.
		b. Giant chromosomes, smear from salivary gland of <i>Chironomus</i> , carefully fixed and stained
		c. <i>Lilium</i> , anther t.s., microspore mother cells showing telophase of first and prophase of second (homotypic) division
		d. Meiotic and mitotic stages in sec. of <i>Salamandra</i> testis. Many meiotic and mitotic stages can be observed.
		e. Mitosis, l.s. from <i>Allium</i> root tips showing all stages of plant mitosis carefully stained with iron-hematoxylin
		f. Mitotic stages in sec. through red bone marrow of mammal
		2. Dimensions (Width x Length): 25 mm x 75 mm ( $\pm$ 0.5 mm);
		3. Thickness: 1.1 mm ( $\pm$ 0.05 mm)
		4. Individually sealed and protected by a cover slip/glass cover;
		5. Each slide is permanently labeled for specimen identification;
		6. Writing the scientific name with correct spelling shall be properly observed;
		7. Slides are kept in a fitted plastic storage box that contains interior padding to avoid breakage
		8. Includes instructions on how to clean and properly store the slide in coated paper-glossy finish (105 mm x 140 mm), Font style: Arial, Font size: 10, written in American English with correct grammar, spelling and punctuation.
25	<b>Reaction Plates with 6 Wells</b>	<b>Functional Specifications:</b> Used to contain small amount of samples of specimens under study
		<b>Performance Specifications:</b> Should be able to contain small amount of samples of specimens under study
		<b>Design Specifications:</b>
		1. Made of clear, non-toxic plastic material that is free from sharp edges.
		2. Plate Shape: Rectangular
		3. Plate Length: 110 mm-120mm
		4. Plate Width: 85 mm -100mm
		5. Six Well per Plate
		6. Well Shape: Circular/ Round
		7. Well diameter: 30 mm -35 mm
		8. Well deep: 6mm-8mm
		9. Well capacity: 1.6 mL -2.0mL
		10. Used for soil and water testing
		11. Must be branded
26	<b>Safety Goggles, polycarbonate</b>	<b>Functional Specifications:</b> Used to protect eyes and face against chemical burns and splashes

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		<p><b>Performance Specifications:</b> Must be able to protect eyes and face against chemical burns and splashes</p>
		<p><b>Design Specifications:</b></p>
		1. Type: Class 2B cover safety goggle
		2. Shape: Features an angled vented portion that does not allow direct straight line from the exterior to the interior of the eyewear which encloses wide area surrounding the eyes
		3. Material of lens : Polycarbonate lens
		4. Sleek wrap-around styling for a 180-degree, clear field of vision with 180° panoramic view
		5. Color: Clear
		6. Lens type: Anti-splash, anti-fog treated/anti-scratch coating
		7. With indirect ventilation channels (preventing penetration of splashes) one through each side of the frame to keep out large particles, dust, and liquids and splash hazards, improves air circulation and reduces fogging in hot/humid conditions
		8. With wrap around elasticized adjustable headband integrated with goggle frame to prevent slippage and holds the goggle more securely
		9. With pivoting headband clips to adjust strap around hard hats or hearing protection
		10. Peel-off goggle covers available to extend the life of the lens
		11. Can be worn over most prescription eyewear (OTG compatible)
		12. With firm comfortable seal around forehead, cheeks, nose and temples; protects against chemicals, dust and grindings
		13. Shall bear mark ANZI Z87.1-2010 Standard for Chemical Splash and Dust Protection, Z87+D3 to indicate an impact protector type (ANSI Z87.1, CE EN 166 or CSA Z94.3 certification compliance) on the frame and the lens
		14. The manufacturer or supplier certification mark must be present on all approved safety lenses, frames (front and temple), removable side shields, and other parts of the glasses, or goggles.
		15. Individually packed in a transparent plastic bag
		16. Labeling of the primary packaging displays, product name, product reference, manufacturer name, size, type, performance testing information for particular storage conditions (temperature, pressure, light, humidity, as appropriate or harmonized symbol as applicable.
		17. With issuance of certification statement from the manufacturer as to the:
		a) Non-toxicity of the materials used
		b) Material of the lens: polycarbonate
		c) It is fog coated/scratch and impact resistant
		18. Comes with a brand
27	<b>Sedimentator Tube</b>	<p><b>Functional Specifications:</b> Used to demonstrate how soil sediments settle in water</p>
		<p><b>Performance Specifications:</b> Should be able to demonstrate how soil sediments settle in water</p>
		<p><b>Design Specifications:</b></p>
		1. 11 inches -12inches height with a diameter of 1 inch minimum
		2. Sealed and leak free
		3. The body made of clear, transparent plastic tube.
		4. With different sediment and water
		5. Functions:
		a. Use for observing movement, deposition, and layering of sediments and organic materials.
		b. Observations apply to sedimentary rock formation and fossil formation

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		6. With English User's Manual that includes
		a. operation guide.
		b. Guide on how to use
		c. Student Activity Sheets
28	Sling Psychrometer	<b>Functional Specifications:</b> Used to measure relative humidity
		<b>Performance Specifications:</b> Should be able to measure relative humidity
		<b>Design Specifications:</b>
		1. Composed of two red spirit thermometers in Celsius with temperature ranges: -5°C to +50 °C
		2. Equipment Size: (7 -8 inches long x 1-2inches diameter)
		3. Built -in Psychrometer Water Reservoir
		4. Includes a wick for Wet Bulb
		5. Wick Replacement Kit- containing 4 wicks
		6. Build in Slide rule construction for quick conversion temperature reading to relative humidity
		7. Includes additional two thermometers for replacement with individual plastic or hardboard case
		8. Easy to rotate to determine the relative humidity.
		9. With English User's Manual and training (please refer to Quality Assurance Procedure during Contract Implementation on the details) that includes:
		a. Operation Guide
		b. Maintenance
		10. Must be branded
29	Soil/Test Sieve	<b>Functional Specifications:</b> Used to separate and segregate different size soil particles
		<b>Performance Specifications:</b> Should be able to separate and segregate different size soil particles
		<b>Design Specifications:</b>
		1. Diameter range: 8 inches - 10 inches
		2. Mesh sizes: 5 Mesh, 10 mesh, 35 Mesh, 60 mesh, 120 mesh, and 230 mesh
		3. Made of stainless steel metal
		4. Set of Six Sieves
		5. Includes lid and catch pan
		6. Must be branded
30	Wash bottle, plastic, 250 mL	<b>Functional Specifications:</b> Used to store and dispense water for diluting solutions, washing precipitates and rinsing glass wares.
		<b>Performance Specifications:</b> Must be able to store and dispenses water in diluting, washing precipitates and rinsing activities.
		<b>Design Specifications:</b>
		1. Translucent and non-toxic plastic material
		2. Cylindrical body shape
		3. Easy squeeze dispensing; no leaks
		4. Capacity: 250 mL
		5. Screw type closure with its angled stem and draw tube molded in one piece

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