



[Signature]
 REYELYN G. BULLICHADE
 REDDOT JV CREATIVE LABS' Witness

 [Signature]
 JOAN A. ONGONION
 REDDOT JV CREATIVE LABS

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

 [Signature]
 LEONOR MAGTOLIS BRIONES
 Department of Education

PROJECT: Mass Production and Supply of Science and Mathematics Equipment Packages to Public Elementary for Grades 1 to 3 & Grades 4 to 6, Public Junior High School for Grades 7 to 10 and Public Senior High School for Grades 11 to 12 (Core and Stem)

CONTRACT NO.: 2021-BLR4(001to006)-BV-CB-009-0134

CONTRACT AGREEMENT

AUG 31 2021

THIS AGREEMENT made and entered into this _____ day of _____ 2021 by and between **DEPARTMENT OF EDUCATION**, located at DepEd Complex, Meralco Avenue, Pasig City, Philippines, represented herein by its Secretary, **LEONOR MAGTOLIS BRIONES**, as per Department Order No. 023, s. 2021 (hereinafter referred to as "DEPED"); and **REDDOT IMAGING PHILIPPINES, INC. IN JOINT VENTURE WITH CREATIVE LABS BERLIN GMBH CORP.** represented herein by its Authorized Representative, **JOAN A. ONGONION**, with office address at 1817-25 España corner Prudencio Street, Sampaloc, Manila, Metro Manila, Philippines (hereinafter referred to as "REDDOT JV CREATIVE LABS").

DEPED and REDDOT JV CREATIVE LABS are collectively called "PARTIES."

WHEREAS, DEPED invited bids for the mass production and supply of Science and Mathematics Equipment Packages consisting of sixteen (16) Lots and received bids from eight (8) bidders; DEPED opened, read, and evaluated the bids of the eight (8) bidders and declared REDDOT JV CREATIVE LABS as having the lowest calculated bid for Lot No. 12; after evaluation, DEPED post-qualified and declared the bid of REDDOT JV CREATIVE LABS as the lowest calculated responsive bid for Lot No. 12 in the sum of **PHILIPPINE PESOS FIFTY-ONE MILLION, FOUR HUNDRED EIGHTY-TWO THOUSAND, NINE HUNDRED THIRTY-EIGHT and 36/100 (PhP 51,482,938.36) ONLY**, (hereinafter called the "Contract Price") detailed as follows:

Lot No.	Description	Amount (PhP)
12	MODELS: MOLECULAR GEOMETRY (MI-LOT 12)	51,482,938.36

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

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


ARIZ DELSON ACAY D. CAWILAN
ALLEGANUE IV
REDDOT JV CREATIVE LABS' Witness


LEONOR MAGTOLIS BRIONES
Department of Education
REDDOT JV CREATIVE LABS


JOANA A. ONGONION
REDDOT JV CREATIVE LABS


JOANA A. ONGONION
REDDOT JV CREATIVE LABS

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 Agreement, viz:
 - i. Philippine Bidding Documents (PBD);
 - a. Schedule of Requirements;
 - b. Technical Specifications;
 - c. General and Special Conditions of the Contract;
 - d. Bid Bulletin No. 1 dated June 1, 2021;
 - e. Bid Bulletin No. 2 dated June 4, 2021;
 - f. Bid Bulletin No. 3 dated June 9, 2021; and
 - g. Bid Bulletin No. 4 dated June 15, 2021.
 - ii. REDDOT JV CREATIVE LABS' bid, including the Eligibility Requirements, Technical and Financial Proposals, and all other documents or statements submitted;
 - iii. Performance Security;
 - iv. Notice of Award of Contract and REDDOT JV CREATIVE LABS' conforme thereto; and
 - v. Other contract documents required by existing laws and/or DepEd in the PBD. REDDOT JV CREATIVE LABS agrees that additional contract documents or information prescribed by the GPPB that are subsequently required for submission after the contract execution, such as the Notice to Proceed, Variation Order, and Warranty Security, shall form part of the Contract.
3. The goods supplied by REDDOT JV CREATIVE LABS under this Contract shall be picked-up or hauled by the third-party logistics provider designated by DEPED. Risk and title to the goods shall pass from REDDOT JV CREATIVE LABS to DEPED upon receipt and final acceptance at REDDOT JV CREATIVE LABS' warehouse. However, assembly, installation, start-up and/or commissioning of items, in cases where they are necessary, shall remain to be the responsibility and for the account of REDDOT JV CREATIVE LABS notwithstanding inspection and acceptance at its warehouse or premises.
4. The goods shall be ready for pick-up or hauling by the third party logistics within **one hundred forty-four (144) calendar days** from receipt of REDDOT JV CREATIVE LABS of the Notice to Proceed.
5. REDDOT JV CREATIVE LABS shall post a Performance Security within ten (10) calendar days from receipt of the Notice of Award in the form and amount prescribed therein. The performance security shall be posted in favor of DEPED, and shall be forfeited in the event it is established that REDDOT JV CREATIVE LABS is in default of any of its obligation under this contract. REDDOT JV

 8-24-2021
ORIGINAL SIGNED
CERTIFIED DUPLICATE COPY
CMDCDC-2021C134-018

CREATIVE LABS shall be responsible for the extension of its performance security and/or undertake to renew its performance security whenever necessary, and without need of prior notice or instruction from the **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.

[Signature]
REDDOT JV CREATIVE LABS' Witness

[Signature]
REDDOT JV CREATIVE LABS

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

[Signature]
LEONOR MAGYOLIS BRIONES
Department of Education

6. The goods supplied under this Contract should conform to and comply with the standards mentioned in Section VI. Schedule of Requirements of the Bidding Documents, as amended by Bid Bulletin Nos. 1, 2, 3 and 4 dated June 1, 2021, June 4, 2021, June 9, 2021 and June 15, 2021, respectively, and must be in accordance with the technical specifications, a copy of which is hereto attached as Annex "A" and made an integral part hereof. Any proposal to deliver items of equivalent, higher or superior technical specifications, in lieu of those of the approved bids or samples shall be discretionary to **DEPED** and is subject to the evaluation and recommendation of the end-user or implementing units and the approval of the herein authorized representative and signatory.
7. Goods with defects or non-compliant with the required specifications during pre-delivery inspection shall be replaced immediately by **REDDOT JV CREATIVE LABS**, and replacement items shall be subjected to re-inspection. Goods with defects or non-compliant with the required specifications upon delivery shall be rejected by **DEPED** and replaced by **REDDOT JV CREATIVE LABS** in accordance with the warranty provisions in the bidding documents. **DEPED** shall have the option to inspect **REDDOT JV CREATIVE LABS'** premises covered by the Contract, at any time or stage of contract implementation, to monitor and assess **REDDOT JV CREATIVE LABS'** capacity to discharge its contractual obligations.
8. The procured goods or items contemplated under this Contract shall be inspected by **DEPED** Inspectorate Team prior to pick-up or hauling from **REDDOT JV CREATIVE LABS'** 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.
9. In case **REDDOT JV CREATIVE LABS** encounters condition(s) impeding timely delivery of the goods, **REDDOT JV CREATIVE LABS** shall promptly notify **DEPED** Procurement Management Service-Contract Management Division (ProcMS-CMD) in writing of such condition(s). As a rule and on account of the emergency nature of this project, no work suspensions and/or contract delivery period extension shall be allowed.
10. The Contract Price shall be paid to **REDDOT JV CREATIVE LABS** in accordance with the following disbursement procedures:
 - 10.1. An advance payment not to exceed fifteen percent (15%) of the Contract Price shall be allowed and paid within sixty (60) calendar days from

[Signature] 9-24-2021
ORIGINAL SIGNED
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[Handwritten Signature]

RENEE M. S. QUIRANA
REDDOT JV CREATIVE LABS' Witness

[Handwritten Signature]

JOAN A. ONGONION
REDDOT JV CREATIVE LABS

[Handwritten Signature]

ARIZ DELSON ACH D. CAWILAN
DEPED's Witness

[Handwritten Signature]

LEONOR MAGTOLIS BRIONES
Department of Education

of an equivalent amount must be submitted, and shall remain valid until the goods are delivered, and accompanied by a claim for advance payment.

10.2. **REDDOT JV CREATIVE LABS** may submit a request for payment based on Progress Reports which shall be attached to the progress billing and include the following: (i) cumulative quantities of items delivered based on the schedule of deliveries and other relevant terms and conditions of the Contract; (ii) Inspection and Acceptance Reports (IARs), including certification by **REDDOT JV CREATIVE LABS**, duly signed and dated by the authorized representative of the **DEPED** indicating that the items have been delivered in accordance with the Contract. Other documents in support of a request for payment may be prescribed by **DEPED** pursuant to existing disbursement, accounting and auditing rules and procedures.

10.3. Subject to the recoupment of the advance payment contemplated in Clause 10.1. above, and retention contemplated in the immediately succeeding clause, payment shall be made to **REDDOT JV CREATIVE LABS** within sixty (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:

10.3.1. For the initial progress payment, a minimum of twenty-five percent (25%) of the Contract Price shall be paid to **REDDOT JV CREATIVE LABS** upon a minimum of twenty-five percent (25%) delivery and acceptance of the items by **DEPED's** authorized representative;

10.3.2. Final payment shall constitute release of the retention money in case of expiry of the warranty period, or whatever is left of it, after it has been called for use under the warranty provision.

11. Payments shall be subject to the "Warranty" provision in the form of either retention money in an amount equivalent to three percent (3%) of every progress payment or a Special Bank Guarantee in the amount equal to three percent (3%) of the Contract Price required under Section 62 of R.A. 9184 and its revised IRR.


11.1. The warranty period of one year shall reckon from the date of issuance of Certificate of Final Acceptance by **DEPED**.

12. **REDDOT JV CREATIVE LABS** shall be liable for liquidated damages for the delay in its performance 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 **REDDOT JV CREATIVE LABS**, or collect from any of the securities or warranties


LEONOR MACTOLIS BRIONES
Department of Education


ARIZ DELSON ACAY D. CAWILAN
DEPED's Witness


JOAN A. ONGONION
REDDOT JV CREATIVE LABS



JENEILYN G. QUIÑANTE
REDDOT JV CREATIVE LABS' Witness


posted by REDDOT JV CREATIVE LABS, whichever is convenient to DEPED. Once the cumulative amount of liquidated damages reaches ten percent (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.

13. 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 Agreement. Should such dispute not be resolved amicably, it shall be submitted to arbitration in the Philippines according to the provisions of Presidential Decree No. 242 and Executive Order No. 292. Provided, however, that by mutual agreement, the Parties may agree in writing to resort to other alternative modes of dispute resolution.

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

SIGNED, SEALED AND DELIVERED BY:


LEONOR MACTOLIS BRIONES
Secretary
Department of Education


JOAN A. ONGONION
Authorized Representative
REDDOT JV CREATIVE LABS

SIGNED IN THE PRESENCE OF:


ARIZ DELSON ACAY D. CAWILAN
DEPED's Witness


JENEILYN QUIÑANTE
REDDOT JV CREATIVE LABS' Witness

CERTIFIED FUNDS AVAILABLE: ₱ 51,482,938.76


M.A. KHUNNAL CATALAN
Chief Accountant


REPUBLIC OF THE PHILIPPINES)
_____, METRO MANILA) S.S

MANILA

ACKNOWLEDGMENT

BEFORE ME, a Notary Public in and for _____, Philippines,
this ____ day of _____ 2021 personally appeared:

NAME

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

LEONOR MAGTOLIS BRIONES
Department of Education

JOAN A. ONGONION
REDDOT JV CREATIVE LABS

Known to me and to me known to be the same persons who executed the foregoing instrument and acknowledge to me that the same is the free and voluntary act and deed of the entities which they respectively represent.

The foregoing instrument is a CONTRACT consisting of six (6) pages (exclusive of attachments), including this page on which this acknowledgment is written and signed by the parties hereto and their instrument witness on the left-hand margin of each and every page hereof.

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

Doc. No. 42
Page No. 85;
Book No. XX;
Series of 2021.

NOTARY PUBLIC

ATTY. JOHN EDWARD TRINIDAD ANG
Notary Public for the City of Manila-Valid 12/31/2021
Notarial Commission No. 2020-033
2/F Midland Plaza Hotel, Adriatico st., Ermita, Manila
IBP. No. 134850 / Dec. 14, 2020 / Pasig City
PTR No.9821951 / Jan. 4, 2021 at Manila
Roll No.68731 MCLE Compliance No. VI-0017186-Jan.24,2019

[Signature]
SHEILA G. BULANE
REDDOT JV CREATIVE LABS' Witness

[Signature]
JOAN A. ONGONION
REDDOT JV CREATIVE LABS

[Signature]
RIZ DELSON ACKAY D. CAWILAN
DEPED's Witness

[Signature]
LEONOR MAGTOLIS BRIONES
Department of Education

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ORIGINAL SIGNED
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Lot No. 12. MODELS: MOLECULAR GEOMETRY

Item No.	Description	Technical Specifications
1	Model, Atomic Orbital, 82-pc Quantity: 335	<p>Used as a model/visual three dimensional (3D) representation of the shapes of the 14 different atomic orbitals</p> <p>Able to visually:</p> <ul style="list-style-type: none"> - represent visually the 14 different atomic orbitals - assemble/build the 14 atomic orbitals (basic s, p and d atomic orbitals) <ul style="list-style-type: none"> i. 1 pc 1s-orbital, unhybridized ii. 1 pc 2s-orbital, unhybridized iii. 3 pc 2p-orbital unhybridized iv. 5 3d-orbital- unhybridized v. one unit with one 2s plus three 2p- orbitals as well as one sp hybrid orbital vi. 1 pc sp - unhybridized vii. 1 pc sp² - unhybridized viii. 1 pc sp³ - unhybridized <p>Design Specifications: Pear shaped lobes Material : Plastic With 14 easy-to-assemble atomic orbitals ((basic s, p and d atomic orbitals ; 5-9 cm.</p> <p>Set is composed of the following: 9 pc Grey atomic orbital parts 17 pc Purple atomic orbital parts 19 pc Pink atomic orbital parts 2 pc White octahedral atom parts 1 pc Black octahedral 23mm carbon atom part 19 pc Pink atomic orbital parts 1 pc Pink monovalent 17mm atom part 1 pc Pink monovalent 23mm atom part 1 pc Purple d atomic disc-shaped orbital part 1 pc Black tetrahedral 23 mm carbon atom part 1 pc Black trigonal bipyramidal 23 mm carbon atom part 1 pc Pink octahedral 23 mm atom part 1 pc Hydrogen H- Bond 17 mm atom part 2 pc White 3-hole 17 mm atom parts 2 pc White octahedral atom parts 2 pc White 7-hole atom parts</p>

		<p>8 pc Grey rigid 27 mm bonds 14 pc clear transparent Pedestal Stand/ bases</p> <p>With Plastic storage with dimensions: Length :10.7 inches Width :6.75 inches Height :2.3 inches</p> <p>With contents list in table form, as to:</p> <p>For atoms: quantity, name of element (symbol), color code, (number of holes,type of bond angles), diameter of the sphere For links; bond types and use</p> <p>Assembly guides, individual worksheets and instructional leaflets in English</p> <p>With User's Manual/Teacher's instruction manual in English</p> <p>For numbers #10 to 12 For Contents List of materials User's Manual, Instruction Sheets/ Assembly Guides, In sentences format Sentences with grammar Correct spelling and terminologies Original print, not photocopied Colored pictures, drawings/illustrations 10 mil laminated Assembly Guides/ instructional leaflets that shall contain the actual colored picture of the model including the name: labeled with the required parts with details as follows:</p> <ol style="list-style-type: none"> i. A4 size , 80 gsm ii. Times New Roman iii. Font size: 12 iv. Margins on all sides with 2 point width border line v. Line with arrow head of 1.25 point with width shall point to the specifi part being labeled <p>10 years</p>
2	Model, Biochemistry Molecular, (262 atom parts)	<p>Used as a model/visual 3D representation of some biomolecules: proteins, nucleic acids, lipids, and carbohydrates, their structures</p> <p>Able to visually:</p>

	<p>Quantity: 5,976</p>	<ul style="list-style-type: none"> - represent some biomolecules proteins, nucleic acids, lipids carbohydrates, their structures, and relate them to their function. - observe the chemical bonding - determine whether the biomolecule is polar or non-polar given its structure - assemble all the different biomolecules <p>Design Specifications:</p> <p>Compact/Semi-space filling models Solid spheres Plastic Diameter of sphere/atom Hydrogen atom: 17 mm Carbon, nitrogen and oxygen atom: 23 mm For compact models, bonds are represented by;</p> <p>Short links V-bonds links Plastic Length of links 11 mm 13 mm Color of links: Short link: white/translucent V-bonds link : white links With 262 color-coded plastic atoms and 260 links</p> <p>Biochemistry Molecular Model set includes the following:</p> <p>262 color-coded plastic atom parts Quantity (pc), Element, Color, Number of holes, Shape 68 Black Carbon atoms 42 pc, Carbon, Black, Four holes, Tetrahedral 24 pc, Carbon, Black, Three holes, Trigonal 2 pc, Carbon, Black, Two holes, Linear</p> <p>34 Blue nitrogen atoms 2 pc, Carbon, Black, Two hole, Linear 12 pc, Nitrogen, Blue, Four holes, Tetrahedral 12 pc, Nitrogen, Blue, Three holes, Trigonal 10 pc, Nitrogen, Blue, Two hole, Angular</p>
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		<p>40 red oxygen atoms 20 pc, Oxygen, Red, Two hole, Angular 10 pc, Oxygen, Red, Two hole, Linear 10 pc, Oxygen, Red, Single hole</p> <p>2 Yellow two hole angular sulfur atoms 2 pc Sulfur, Yellow, Two hole, Angular</p> <p>6 purple tetrahedral atoms 6 pc, PhosphorusPurple, Four hole, Tetrahedral</p> <p>2 grey metal atoms One (1) pc, Metal, Grey, Four hole, Tetrahedral One (1) pc, Metal, Grey, Six hole, Octahedral</p> <p>110 White Hydrogen atoms 100 pc White atom links 10 pc, Hydrogen, White, Two hole, Linear</p> <p>260 links of plastic mushroom "links/bonds" 150 NV-links, colorless 100 Short white links 10 V-links, grey</p> <p>With link remover tool Color : cream</p> <p>2 compartmentalized hard plastic storage box 4 compartments: Length: 23.88 Width: 16.76 cm Height: 6.86 cm</p> <p>With contents/ list of materials in table form: For atoms: quantity, name of element(symbol), color code, (number of holes,type of bond angles), diameter of the sphere For links; bond types and use</p> <p>With Assembly Guides, individual worksheets and instructional leaflets in English</p> <p>User's Manual/Teacher's instruction manual in English</p>
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		<p>#10 to 12; technical specifications a-e must be followed:</p> <p>Contents List of materials, In Table form</p> <p>User's Manual, Instruction Sheets/ Assembly Guides</p> <p>Sentences grammatically correct</p> <p>Correct spelling and terminologies</p> <p>Original print, not photocopied</p> <p>Colored pictures, drawings/illustrations</p> <p>(10) mil laminated Assembly guides/ instructional leaflets that shall contain the actual colored picture of the model including the name: labeled with the required parts with details as follows</p> <ol style="list-style-type: none"> i. A4 size , 80 gsm ii. Font: Times New Roman iii. Font size: 12 iv. Margins on all sides with 2 point width border line v. Line with arrow head of 1.25 point with width shall point to the specific part being labeled <p>10 years</p>
3	<p>Model, Crystal Structures Set (Graphite, diamond, sodium chloride, carbon dioxide) 301 pc/set</p> <p>Quantity: 5,976</p>	<p>Used as a model/ visual 3D representation of four crystal compounds</p> <p>Able to visually:</p> <ul style="list-style-type: none"> - To represent the four different types of crystals and their properties: ionic, covalent, molecular, and metallic - To describe the difference in structure of crystalline (diamond) and amorphous (graphite) solids - observe the difference of the ionic, covalent and metallic bonds - determine whether a crystal molecule is polar or non polar given its structure - assemble the four crystal structures <p>Design Specifications:</p> <p>Open/Ball and stick</p> <p>Solid spheres</p> <p>Plastic with the following dimensions:</p> <ol style="list-style-type: none"> a) Sodium, carbon: 22.5 mm b) Copper: 25 mm

		<p>c) Chlorine: 30 mm</p> <p>Types of links/bonds Medium (Single, rigid) links Long (double/triple, flexible) links</p> <p>Material of links: Flexible plastic and solid links</p> <p>Length of solid links/rods Medium: 23 mm Long: 43 mm</p> <p>Color of links/bonds Medium links: grey white/purple Long links: gray</p> <p>The Crystal structure set is composed of the following: Diamond- covalent crystal model (30 atoms) Element, Number of holes, Angle, Shape, Color, Quantity(pc) Carbon, 4 hole, 109.5°, Tetrahedral, Black, 30 Placed in resealable plastic bag Links/Bonds, Color, Quantity (pc) Medium links/ Bonds, Grey white, 40 Placed in resealable plastic bag Sodium chloride (NaCl)- i/onic crystal model (27 atoms) Element, Number of holes, Shape, Color, Quantity(pc) Chlorine, 6 hole, Octahedral, Green, 13 Sodium, 6 hole, Octahedral, Silver gray/grey, 14</p> <p>Placed in two (2) separate resealable plastic bags Links/Bonds, Color, Quantity (pc) Medium, Grey white, 54</p> <p>Plastic bag Graphite - covalent crystal model (45 atoms) This kit is designed to make a three layer model of graphite having 15 carbon atoms in each layer. Element, Number of holes, Color, Quantity (pc) Carbon, 5 hole, Black, 45</p> <p>Placed in resealable plastic bag</p>
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		<p>Links/Bonds, Color, Quantity (pc) Medium (single, rigid), Grey/ white, 51 Medium (single, rigid), Purple, 16</p> <p>2 separate resealable plastic bag</p> <p>Copper - metallic crystal model/atoms + links = 50 pc</p> <p>Copper : 14 atoms</p> <p>Crystal structure : face center cubic</p> <p>Element, Number of holes, Color, Quantity (pc) Copper, 8 hole, Red, 8 Copper, 6 hole, Red, 6</p> <p>2 separate Ziploc plastic bag</p> <p>Links/Bonds - 36 pc</p> <p>Links/Bonds, Color, Length, Quantity (pc) Medium, Grey white, 75 mm, 24 Long, Grey white, 112 mm, 12</p> <p>2 separate resealable plastic bag Link remover tool/ Assembly tool With storage box Plastic Package Dimensions Length: 23.0 cm Width: 16.5 cm Height :7 cm</p> <p>With contents/ list in table form: For atoms: quantity, name of element (symbol), color code, (number of holes, type of bond angles), diameter of the sphere For links; bond types and use</p> <p>With assembly guides, individual worksheets and instructional leaflets</p> <p>User's Manual/Teacher's instruction manual in English #10 to 12; they must follow technical specifications a-e: For Contents List of materials, In Table form</p>
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		<p>User's Manual, Instruction Sheets/ Assembly Guides Sentences grammar correct Spelling and terminologies</p> <p>Original print, not photocopied</p> <p>Colored pictures, drawings/illustrations</p> <p>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> <ol style="list-style-type: none"> i. A4 size , 80 gsm ii. Times New Roman iii. Font size: 12 iv. Margins on all sides with 2 point width border line v. Line with arrow head of 1.25 point with width shall point to the specific part being labeled <p>10 years</p>
4	<p>Model, Molecular, Inorganic/Organic (307-pc)</p> <p>Quantity: 5,976</p>	<p>Used as a model/visual three dimensional (3D) representation of the different inorganic/organic compounds</p> <p>Able to visually:</p> <ul style="list-style-type: none"> - To represent the molecular structures of many inorganic/organic molecules and - To assemble inorganic/organic compounds to show covalent and ionic bonding and determine whether a molecule is polar or non polar given its structure <p>Design Specifications: Ball and stick Solid spheres Plastic Diameter of sphere/atom Hydrogen and chlorine atoms: 17 mm Other atoms: 22.5 mm Flexible plastic low density solid links Length, color and quantity of solid links/rods</p> <p>Short links For space filling 11 mm, Translucent/white, 60 pc Medium links Single, rigid</p>

		<p>27 mm, Grey, 60 pcs</p> <p>Long links Double/triple/flexible 43 mm, Grey, 30 pc 126 atoms, 30 orbitals, 150 links and 1 short link remover tool</p> <p>The inorganic/organic molecular model set is composed of the following:</p> <p>Shape, No. of holes, Angles, Element/atom, Color, Qty (pc)</p> <p>Tetrahedral, 4 holes, 109°28', Carbon, Black, 30 Trigonal, 5 holes, 90°/120°, Carbon, Black, 8 bipyramidal Linear, 2 holes, 180°, Carbon, Black, 2 Trigonal, 3 holes, 120°, Carbon, Black, 6 Divalent, 2 holes, 105°, Oxygen, Red, 14 Monovalent, 1 hole, Hydrogen, White, 45 Tetrahedral, 4 holes, 109°28', Nitrogen, Blue, 4 Divalent, 2 holes, 105°, Sulfur, Yellow, 1 Tetrahedral, 4 holes, 109°28', Sulfur, Yellow, 1 Tetrahedral, 4 holes, 109°28', Phosphorus, Purple, 4 Monovalent, 1 hole, 180°, Chlorine, Green, 8 Octahedral, 6 holes, 90°, Metal, Silver/grey, 2 Octahedral, 6 holes, 90°, Metal, Silver/grey, 2</p> <p>Orbitals: 30 pc Orbitals, Lengths, Color, Quantity (pc)</p> <p>Pi orbitals, 38 mm, purple, 6 Pi orbitals, 38 mm, pink, 6 P orbitals, 38 mm, purple, 6 P orbitals, 38 mm, pink, 6 P orbitals, 38 mm, beige, 6</p> <p>Links (represented the bonds): 150 links</p>
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		<p>Material of bonds/links : Rigid, non-toxic Flexible plastic Links, Type/Kind of bonds, Length, Color, Quantity(pc)</p> <p>Medium links (single, rigid), 27 mm, Grey, 60 Long links, double/triple/flexible, 43 mm, Grey, 30 Short links, 11 mm, Translucent/ 60, (for space filling) White</p> <p>One (1) pc Link remover tool/ Assembly tool</p> <p>Storage box with four (4) compartments with the following dimensions: Length: 23.9 cm Width: 17 cm Height: 7.1 cm</p> <p>Storage box: Plastic</p> <p>Color of storage box: Grey</p> <p>With contents/list of materials, in table form, as : For atoms: quantity, name of element(symbol), color code, (number of holes,type of bond angles), diameter of the sphere. For links; bond types and Assembly guides, Individual Worksheets and Instructional leaflets</p> <p>User's Manual/Teacher'sManual in English #9 to 12; technical specifications a-e must be strictly followed:</p> <p>Contents/ List of materials, In Table form</p> <p>User's Manual, Instruction Sheets/ Assembly Guides Sentences grammatically correct Correct spelling and terminologies Original print, not photocopied</p> <p>Colored pictures, drawings/illustrations</p> <p>10 mil laminated that shall contain the actual colored picture of the model including the name: labeled with the required parts with details as follows:</p> <ol style="list-style-type: none"> i. A4 size , 80 gsm ii. Times New Roman iii. Font size: 12
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		<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 specifi part being labeled</p> <p>10 years</p>
5	<p>Model, Sublevel Orbitals of the Atom (Quantum)</p> <p>Quantity: 14,940</p>	<p>Used as a visual representation of the spatial three-dimensional (3D) model of the shapes of the orbitals (azimuthal quantum number) of the sublevels of the major energy levels of the first ten elements of the Periodic Table</p> <p>Able to visually :</p> <ul style="list-style-type: none"> - To represent the spatial three-dimensional (3D) model of the shapes of the orbitals to describe the quantum mechanical model (azimuthal quantum model) of the first ten elements in the Periodic Table <ul style="list-style-type: none"> a) 2 pc s orbitals <ul style="list-style-type: none"> 1s-orbital and 2s-orbital, b) 3 p orbitals <ul style="list-style-type: none"> 2px-orbital 2py-orbital, and 2pz-orbital c) Position and number of electrons along the x, y and z axis d) Orbitals of the sublevels of the major energy levels - Assemble the sublevel orbital of the first ten elements of the Periodic Table based on the electronic configuration of each, to review on the four (4) quantum numbers and rules in filling up the orbitals (the Aufbau Principle, Pauli's exclusion principle, and Hund's rule) , to study and learn the correct position and number of electrons along the x, y and z axis,as well as the orbitals of the sublevels of the major energy levels <p>Design Specifications:</p> <ol style="list-style-type: none"> 1. 12 Models of the Sublevel orbitals of the atom 2. Color-coded components which include the following: 3. ORBITALS <ol style="list-style-type: none"> a. 1s-orbitals (K shell) <ul style="list-style-type: none"> Small sphere, Plastic, Blue, 12 pc

		<p>b. 2s-orbitals (L shell) Large sphere, Plastic, Orange, 12 pc</p> <p>c. P-orbitals (M shell) - px -orbitals Pear shaped lobes, Plastic, Red, 24 pc</p> <p>- py-orbitals Pear shaped lobes, Plastic, Yellow, 24 pc</p> <p>- pz -orbital Pear shaped lobes, Plastic, Green, 24 pc</p> <p>d. Bases Spherical, Plastic, White, 12 pc</p> <p>e. Crossbars (x and z axes) Cross-shaped, Durable non-toxic plastic, White, 12 pc</p> <p>f. Electrons Small circular cutouts in a plastic sheet, Plastic, Black, 1 whole plastic sheet with cut out 128 pc electrons</p> <p>g. Uprights (y axes) Long, cylindrical sticks, Plastic, Cream, 12 pc</p> <p>4. segregated in separate resealable plastic bags</p> <p>5. Comes with hard storage box Plastic, Grey, storage box with four(4)compartments</p> <p>6. List of Contents in the set</p> <p>7. Teacher's Guide</p> <p>8. 30 Student Worksheets and Guides, Part I and Part II</p> <p>9. Quantum numbers chart provided on each student worksheet to help students assemble the models starting with the 1s orbitals.</p> <p>10. Detailed instructions provided.</p> <p>11. Numbers 6-10, the following technical specifications from (a-e) must be followed:</p> <p>a. With contents/ List of materials, In Table form</p> <p>b. User's Manual, Teacher's Guide, StudentWorksheets, Instruction Sheets/ Assembly Guides</p> <p>- Sentences grammatically correct</p> <p>- Correct spelling and terminologies</p> <p>c. Original print, not photocopied</p> <p>d. Colored pictures, drawings/illustrations</p> <p>e. 10 mil laminated</p> <p>- keycard that shall containthe actual colored picture of the model including the name:</p>
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		<p>labeled with the required parts with details as follows</p> <ul style="list-style-type: none"> - A4 size , 80 gsm - Times New Roman - Font size: 12 - Portrait - Margins on all sides with 2 point width border line - Line with arrow head of 1.25 point with width shall point to the specifi part being labeled <p>12. 10 years</p>
6	<p>Model, VSEPR, 14 shapes (50-pc)</p> <p>Quantity: 14,940</p>	<p>a) Used as a visual 3D representation of the 14 different shapes of simple molecules with corresponding angles to perform exercises on VSEPR theory using models</p> <p>b) Describe the geometry of simple compounds</p> <p>Able to visually:</p> <ul style="list-style-type: none"> - To represent all the 14 different shapes of simple molecules with corresponding angles to perform exercises on VSEPR theory - Describe the geometry of simple compounds - Assemble the 14 different shapes of VSEPR Models and study them <p>Design Specifications:</p> <p>Ball and stick</p> <p>Solid spheres</p> <p>Plastic</p> <p>Diameter of sphere/atom</p> <p>Hydrogen, halogen, and metal sphere/atom: 17 mm 22.4 mm</p> <p>Set is composed of the following:</p> <p>With central atoms to construct 14 VSEPR shapes;</p> <p>Color</p> <p>Number of holes</p> <p>Shape Example metallic grey</p> <p>2 hole linear (e.g.,beryllium in BeCl_2) yellow</p> <p>3 hole trigonal (e.g., sulfur in SO_3) black</p> <p>4 hole tetrahedral(e.g., carbon in CH_4) yellow</p> <p>4 hole tetrahedral (e.g., sulfur in SO_3^{2-}) red</p> <p>4 hole tetrahedral (e.g., oxygen in H_2O) light green</p> <p>4 hole tetrahedral (e.g., flourine in HF) light brown</p> <p>5 hole trigonal bipyramidal (e.g., phosphorus in PCL_5) yellow</p> <p>5 hole trigonal bipyramidal</p>

		<p>(e.g., sulfur in SF₄) green 5 hole trigonal bipyramidal (e.g., chlorine in ClF₃) purple 5 hole trigonal bipyramidal (e.g., xenon in XeF₂) grey 6 hole octahedral (e.g., metal complexes) brown 6 hole octahedral (e.g., bromine in BrF₅) copper 6 hole octahedral (e.g., copper complexes) With the following links/bonds: Quantity (pc) Color Links Bonds 50 grey medium linkssingle bonds 15 purple medium linkslone pairs 6 white short links cyanide group With short link remover tool 1 pc</p> <p>With storage box Plastic Four (4)</p> <p>Detailed assembly guides and instructions provided.</p> <p>Assembly guides, individual worksheets and instructional leaflets</p> <p>User's Manual/Teacher's instruction manual in English #9 to 12; technical specifications a-e must be strictly followed:</p> <p>Contents List of materials, In Table form</p> <p>User's Manual, Instruction Sheets/ Assembly Guides Sentences grammatically correct Correct spelling and terminologies</p> <p>Original print, not photocopied</p> <p>Colored pictures, drawings/illustrations</p> <p>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> <ol style="list-style-type: none"> i. A4 size , 80 gsm ii. Times New Roman iii. Font size: 12 iv. Orientation: Portrait
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		<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 specifi part being labeled</p> <p>10 years</p>
7	<p>Model, Basic 3D Geometrical Solids</p> <p>Quantity: 3,749</p>	<p>Used to represent basic three-dimensional figures.</p> <p>Able to demonstrate geometrical concepts related to properties of geometrical solids.</p> <p>Design Specifications:</p> <p>17 types of Geometrical Solids which includes these core shapes:</p> <ul style="list-style-type: none"> a) 10cm x 10cm x 10cm b) Height = 10cm; Base diameter = 10cm c) Height = 10cm; Base diameter = 10cm d) Hexagonal prism: Height = 10cm; Length of sides (Base) = 5.18cm (± 0.02cm) e) Hexagonal pyramid: Height = 10cm; Length of sides (Base) = 5.18cm (± 0.02cm) f) Pentagonal prism: Height = 10cm; Length of sides (Base) = 6.26cm (± 0.02cm) g) Pentagonal pyramid: Height = 10cm; Length of sides (Base) = 6.26cm (± 0.02cm) h) Rectangular prism: 10cm x 5cm x 10cm i) Square pyramid: Height = 10cm; Base diameter = 10cm j) Triangular prism: Height = 10cm; Length of sides (Base) = 10.25cm (± 0.02cm);and k) Triangular pyramid: Height = 10cm; Length of sides (Base) = 10.35cm (± 0.02cm) l) Sphere: Diameter of Great Circle = 10cm m) Semisphere: Diameter of Great Circle = 9.9cm n) Square prism: 10cm x 5cm x 5.6cm o) Small cube: 5.2cm x 5.2cm x 5.2cm p) Small Triangular Prism: Height = 10cm; Length of sides (Base) = 5.18cm (± 0.02cm) q) Small Cylinder: Height = 10cm; Base diameter = 5cm r) Hard, durable plastic s) Sturdy plastic container with cover to accommodate the 17 or more types of geometric solids <p>Smooth surface</p>