



DEPARTMENT OF EDUCATION
Region X- Northern Mindanao

DIVISION OF MALAYBALAY CITY

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DIVISION MEMORANDUM

No. 337 s. 2014

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DepEd-MALAYBALAY CITY DIVISION
RELEASED

Date: 11/10/14 Time: 4:02 PM
By: [Signature]

To : Education Program Supervisors
Public Schools District Supervisors
Elementary School Heads

From : **EDILBERTO L. OPLENARIA**
Schools Division Superintendent

Date: November 7, 2014

Re : DISSEMINATION OF DepED ORDER NO. 39 S. 2011 RE: GUIDELINES ON
THE IMPLEMENTATION OF THE SCIENCE AND MATHEMATICS
EQUIPMENT PROJECT FOR FY 2011

For information and guidance enclosed is a copy of DepED ORDER NO. 39
S. 2011 RE: GUIDELINES ON THE IMPLEMENTATION OF THE SCIENCE
AND MATHEMATICS EQUIPMENT PROJECT FOR FY 2011 which is self-
explanatory.

For your information and appropriate action.

[Signature]
EDILBERTO L. OPLENARIA
Schools Division Superintendent



NOV 04 2011

DepEd ORDER
No. 89, s. 2011

**GUIDELINES ON THE IMPLEMENTATION OF THE SCIENCE AND MATHEMATICS
EQUIPMENT PROJECT FOR FY 2011**

To : Undersecretaries
Assistant Secretaries
Bureau Directors
Regional Directors
Schools Division/City Superintendents
Heads, Public Elementary and Secondary Schools
All Others Concerned

1. To support the strengthening of Science and Technology Education in basic education, the Department of Education (DepEd), through the National Science Teaching Instrumentation Center (NSTIC) shall distribute packages of Science and Mathematics equipment, including laboratory glassware and storage cabinets, to Special Science Elementary Schools (SSES) and to selected low-performing public elementary and secondary schools.
2. The Science and Mathematics equipment packages that will be distributed to the schools are based on the prescribed list of equipment per DepEd Order No. 118, s. 2009, entitled "*Prescribing the List of Science and Mathematics Equipment, Laboratory Glassware and Consumables for All Year Levels of Elementary and Secondary Schools.*"
3. For Fiscal Year (FY) 2011, a total amount of PhP727,548,000.00 shall be provided for the procurement of the approved Science and Mathematics equipment and storage cabinets, and for the conduct of the trainings.
4. The distribution of the goods shall be focused on the forty-three (43) Special Science Elementary Schools (SSES) and select low-performing elementary and secondary schools in various regions. Schools with average Mean Percentage Scores (MPS) of 35% and below in Science and Mathematics in the National Achievement Test (NAT) for School Year (SY) 2009-2010 will be given priority in the distribution of the equipment. Schools which have available and functional Science and Mathematics equipment will not be included among the recipient schools.
5. To simplify the accounting and inventory of the goods, the NSTIC shall deliver the Science and Mathematics equipment packages to the recipient schools simultaneously.
6. Enclosure No. 1 outlines the regional distribution of recipient schools. Enclosure No. 2 shows the list of Science and Mathematics equipment, including laboratory glassware and cabinets that will be received by each recipient school in the elementary and secondary levels.

7. For inquiries, please contact the following NSTIC personnel: **Mr. Marvin S. Maquilas** or **Engr. Ralph H. Neri** at telephone nos.: (032) 255-3633 to 35 or telefax no.: (032) 255-3005, or send a message through e-mail address: depednstic@yahoo.com.

8. Immediate dissemination of and strict compliance with this Order is directed.


BR. ARMIN A. LUISTRO FSC
Secretary

Encls.:

As stated

Reference: DepEd Order No. 118, s. 2009

To be indicated in the Perpetual Index
under the following subjects:

EQUIPMENT
Learning Area, MATHEMATICS
POLICY
SCHOOLS
SCIENCE EDUCATION

R: Alma/DO guidelines for the implementation of the Science and Mathematics Equipment Project 2011
November 2, 2011

Enclosure to DepEd Order No. 89, s. 2011)
 Department of Education
 DepED-NATIONAL SCIENCE TEACHING INSTRUMENTATION CENTER
 REGIONAL DISTRIBUTION OF RECIPIENT SCHOOLS

| REGION | PHP 727.5M PROJECT (FY 2011) | | | |
|--------------------------|---|-----------------------|--|-----------------------|
| | H.S. SCIENCE I-IV EQUIPMENT AND MATH I-IV EQUIPMENT | | ELEM. SCIENCE 1-6 EQUIPMENT AND MATH 1-6 EQUIPMENT | |
| | NO. OF HIGH SCHOOLS | AMOUNT (Php) | NO. OF ELEM. SCHOOLS | AMOUNT (Php) |
| I | 35 | 39,504,220.00 | 28 | 7,891,492.00 |
| II | 26 | 29,345,992.00 | 26 | 7,327,814.00 |
| III | 40 | 45,147,680.00 | 34 | 9,582,526.00 |
| IV-A | 40 | 45,147,680.00 | 32 | 9,018,848.00 |
| IV-B | 26 | 29,345,992.00 | 21 | 5,918,619.00 |
| V | 40 | 45,147,680.00 | 36 | 10,146,204.00 |
| VI | 46 | 51,919,832.00 | 38 | 10,709,882.00 |
| VII | 51 | 57,563,292.00 | 34 | 9,582,526.00 |
| VIII | 30 | 33,860,760.00 | 42 | 11,837,238.00 |
| IX | 25 | 28,217,300.00 | 24 | 6,764,136.00 |
| X | 20 | 22,573,840.00 | 24 | 6,764,136.00 |
| XI | 20 | 22,573,840.00 | 19 | 5,354,941.00 |
| XII | 25 | 28,217,300.00 | 19 | 5,354,941.00 |
| CARAGA | 25 | 28,217,300.00 | 18 | 5,073,102.00 |
| ARMM | 51 | 57,563,292.00 | 24 | 6,764,136.00 |
| CAR | 20 | 22,573,840.00 | 18 | 5,073,102.00 |
| NCR | 14 | 15,801,688.00 | 5 | 1,409,195.00 |
| TOTAL | 534 | 602,721,528.00 | 442 | 124,572,838.00 |
| GRAND TOTAL (Php) | | | | 727,294,366.00 |

(Enclosure No. 2 to DepEd Order No. 89, s. 2011)

Department of Education

NATIONAL SCIENCE TEACHING INSTRUMENTATION CENTER

LIST OF SCIENCE AND MATHEMATICS EQUIPMENT, INCLUDING LABORATORY GLASSWARES AND CABINETS THAT WILL BE RECEIVED BY EACH RECIPIENT SCHOOL IN THE ELEMENTARY AND SECONDARY LEVELS

| PARTICULARS | | |
|--|----------------|---------------|
| ITEMS | Qty per School | Unit of Issue |
| I. HIGH SCHOOL: | | |
| A. HIGH SCHOOL SCIENCE: | | |
| A.1) Mass Production Items: | | |
| 1 NSTIC-developed Basic Science Equipment: | | |
| 1) Stand Base Assembly | 10 | assy |
| 2) Stand Support | 20 | pc |
| 3) Ring with stem | 5 | pc |
| 4) Ø9.5mm x 250mm long Stand Rod | 19 | pc |
| 5) Ø9.5mm x 500mm long Stand Rod | 20 | pc |
| 6) Ø12.7mm x 1000mm long Stand Rod | 5 | pc |
| 7) Multiclamp Assembly | 25 | assy |
| 8) Universal Bosshead Assembly | 10 | assy |
| 9) Universal Clamp Assembly | 12 | assy |
| 10) Test Tube Holder | 5 | pc |
| 11) Test Tube Rack | 6 | pc |
| 12) Case 001 (with Cover and Base Sheathing) | 1 | pc |
| 13) Case 002 (with Cover and Base Sheathing) | 1 | pc |
| 14) Case 003 (with Cover and Base Sheathing) | 1 | pc |
| 15) User's Manual | 1 | pc |
| 2 NSTIC-developed Mechanics Science Equipment | | |
| 1) Cart-Rail System (includes Dynamic Carts, Motorized Cart, Rails, etc.) | 5 | set |
| 2) Free-Fall Apparatus (includes Solenoid, Pad Switch, Synchro Box, Timer, etc.) | 5 | set |
| 3) Hooke's Law Apparatus | 5 | set |
| 4) Friction Apparatus | 5 | set |
| 5) Lever Assembly | 5 | assy |
| 6) Pulley Set | | |
| 6.1) Double Pulley Assembly | 10 | assy |
| 6.2) Single Pulley Assembly | 10 | assy |
| 7) Spring Balances: | | |
| 7.1) 10-Newton Spring Balance Assembly | 5 | assy |
| 7.2) 5-Newton Spring Balance Assembly | 5 | assy |
| 7.3) 2-Newton Spring Balance Assembly | 5 | assy |
| 8) C-Clamp with hook | 10 | pc |
| 9) Hooked Masses: | | |
| 9.1) 500-gram Hooked Mass | 5 | pc |
| 9.2) 250-gram Hooked Mass | 10 | pc |
| 9.3) 20-gram Hooked Mass | 25 | pc |
| 10) Case 001 (with Cover and Base Sheathing) | 5 | pc |
| 11) Case 002 (with Cover and Base Sheathing) | 5 | pc |
| 12) Case 003 (with Cover and Base Sheathing) | 5 | pc |
| 13) Spare Parts: | | |
| 13.1) Worm with Axle Assembly | 5 | assy |
| 13.2) Worm Gear A | 10 | pc |
| 13.3) Spur Gear B | 10 | pc |
| 13.4) Spur Gear C | 5 | pc |
| 14) User's Manual | 1 | pc |
| 15) Experiment Module | 1 | pc |
| 3 NSTIC-developed Thermocline Apparatus | 5 | pc |
| 4 NSTIC-developed Heat Conductivity Apparatus | 5 | pc |
| A.2) Market Items: | | |
| 1) Integrated Science: | | |
| 1 Aneroid Barometer Set (demonstration type) | 1 | unit |
| 2 Aneroid Barometer Set (wall type) | 1 | unit |
| 3 Hand Lens, at least 5x magnification | 5 | pc |

| PARTICULARS | | | |
|-------------|---|----------------|---------------|
| | ITEMS | Qty per School | Unit of Issue |
| 4 | Rain Gauge | 1 | unit |
| 5 | Protractor, plastic, 180°, semi-circular, 15cm diameter (minimum) | 5 | pc |
| 6 | Stopwatch, digital | 5 | pc |
| 7 | Balance, Triple-Beam | 5 | unit |
| 8 | Relief Globe, Ø 12 inches | 1 | unit |
| 9 | Bulb, flashlight size, 2.5 V, screw-type | 20 | pc |
| 10 | Bulb Socket, flashlight size, screw-type | 20 | pc |
| 11 | Penlight, 3 V, plastic case | 5 | pc |
| 12 | Rubber Stopper # 6, with 2 holes | 5 | pc |
| 13 | Rubber Stopper # 1, without holes | 5 | pc |
| 14 | Rubber Stopper # 1, with 1 hole | 5 | pc |
| 15 | Map of World Climates, 36" x 24", tarpaulin | 1 | unit |
| 16 | Map of Philippine Climates, 22" x 35", tarpaulin | 1 | unit |
| 17 | Map of Philippine Volcanoes, 22" x 35", tarpaulin | 1 | unit |
| 18 | Map of Stars, 36" x 36", tarpaulin | 1 | unit |
| 19 | Poster: Layers of the Earth, 28" x 44", tarpaulin | 1 | unit |
| 20 | Poster: The Richter Magnitude Scale, 28" x 44", tarpaulin | 1 | unit |
| 21 | Seismograph Model | 1 | unit |
| 22 | Anemometer with Wind Vane, handheld, digital direct reading | 1 | unit |
| 23 | Magnetic Compass | 5 | pc |
| 24 | AWG # 22 Wire, red, 250mm long with alligator clips at both ends | 6 | lh |
| 25 | AWG # 22 Wire, black, 250mm long with alligator clips at both ends | 6 | lh |
| 26 | AWG # 22 Wire, red, 500mm long with alligator clips at both ends | 6 | lh |
| 27 | AWG # 22 Wire, black, 500mm long with alligator clips at both ends | 6 | lh |
| 28 | Bar Magnet, 6" x 3/4" x 1/4" | 5 | pc |
| 29 | U-shaped Magnet, 3" L x 3" W x 3/4" thick | 5 | pc |
| 30 | Graduated Cup, 200 ml. Capacity, plastic, transparent | 5 | pc |
| 31 | Meterstick, plastic | 5 | pc |
| 32 | Ring and Ball Apparatus | 5 | unit |
| 33 | Glass Rod, solid, Ø 6mm (minimum) x 300mm long (Insulator) | 5 | pc |
| 34 | Plastic Rod, solid, Ø 6mm (minimum) x 300mm long (Insulator) | 5 | pc |
| 35 | Wood Rod, solid, Ø 6mm (minimum) x 300mm long (Insulator) | 5 | pc |
| 36 | Copper Rod, solid, Ø 6mm (minimum) x 300mm long (Conductor) | 5 | pc |
| 37 | Aluminum Rod, solid, Ø 6mm (minimum) x 300mm long (Conductor) | 5 | pc |
| 38 | Steel Rod, solid, Ø 6mm (minimum) x 300mm long (Conductor) | 5 | pc |
| 39 | Sun-Earth-Moon Model | 1 | unit |
| 40 | Solar System Model | 1 | unit |
| 41 | Celestial Globe | 1 | unit |
| 42 | Rock Samples Box, 24 compartments | 1 | pc |
| 43 | Telescope, astronomical | 1 | unit |
| 44 | Bunsen Burner, gas-type | 1 | unit |
| 45 | Tweezer, 6 1/2" long, stainless steel, self-closing, with wood handle & serrated jaws | 5 | pair |
| 46 | Laboratory Tong, stainless steel, 8 3/4" long | 5 | pc |
| 47 | Test Tube Brush | 5 | pc |
| 48 | Hand Gloves, acid/solvent-resistant, super nitrile | 5 | pair |
| 49 | Safety Goggles | 5 | pair |
| 50 | Storage Cabinet, 1800 mm x 2000 mm x 500 mm | 2 | unit |
| 51 | Beaker, 250 ml., borosilicate | 5 | pc |
| 52 | Erlenmeyer Flask, 250 ml., borosilicate | 5 | pc |
| 53 | Stirring Rod, Ø 6mm x 250mm long | 5 | pc |
| 54 | Test Tube, Ø 16mm x 150.8mm long | 30 | pc |
| 55 | Glass Tubing, Ø 4mm x 1220mm long | 5 | lh |
| 56 | Val, Ø 12mm x 75mm long | 25 | pc |
| 57 | Graduated Cylinder, 100 ml. capacity | 5 | pc |
| 58 | Graduated Cylinder, 10 ml. Capacity | 5 | pc |
| 59 | Glass Funnel, Ø 50mm (Top Inside Diameter), 100mm long Stem | 5 | pc |
| 60 | Petri Dish, Ø 100mm (minimum) | 5 | pc |
| 61 | Watch Glass, Ø 100mm (minimum) | 5 | pc |
| 62 | Reagent Bottle, 250 ml. capacity | 5 | pc |
| 63 | Glass Tubes, Hematocrite, 100's/pack (for experiments in capillarity) | 1 | pack |
| 64 | Glass Tube, 3mm OD x 1200mm long (for experiments in capillarity) | 5 | lh |
| 65 | Glass Tube, 6mm OD x 1200mm long (for experiments in capillarity) | 5 | lh |
| 66 | Hydrometer, Specific Gravity: 0.700 - 2.000, 15" long | 5 | pc |
| 67 | Alcohol Thermometer, -20°C to 110°C | 10 | pc |
| 68 | Evaporating Dish, 75 ml. capacity | 10 | pc |
| 69 | Alcohol Burner, glass, 120 ml. Capacity | 5 | pc |

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| PARTICULARS | | | |
|-------------|--|----------------|---------------|
| | ITEMS | Qty per School | Unit of Issue |
| 70 | Mortar and Pestle, 300 ml. Capacity | 5 | set |
| 71 | Syringe, 10 ml. Capacity, without needle | 5 | pc |
| 72 | Medicine Dropper, 2 ml. capacity | 30 | pc |
| 73 | Triangular File, 6" long | 5 | pc |
| | 2) Biology: | | |
| 1 | Microscope, Compound | 20 | unit |
| 2 | Dissecting Set | 5 | set |
| 3 | Model, Human Torso | 1 | unit |
| 4 | Model, Human Skeleton | 1 | unit |
| 5 | Model, Animal Mitosis | 1 | unit |
| 6 | Model, Animal Meiosis | 1 | unit |
| 7 | Hand Lens, at least 5x magnification | 5 | pc |
| 8 | Balance, Triple-Beam | 5 | unit |
| 9 | Cork Borers, 4mm to 20mm OD, 12 borers/set | 1 | set |
| 10 | Tripod, Height, 6" | 5 | pc |
| 11 | Cork Stopper for Ø 16mm test tube | 20 | pc |
| 12 | Rubber Stopper for Ø 16mm test tube | 20 | pc |
| 13 | Rubber Stopper # 6 with 2 holes | 5 | pc |
| 14 | Filter Paper, ordinary, 24" x 24" sheet | 25 | sht |
| 15 | Litmus Paper Strips, blue, 100's/vial | 1 | vial |
| 16 | Litmus Paper Strips, red, 100's/vial | 1 | vial |
| 17 | Hand Gloves, acid/solvent-resistant, super nitrile | 5 | pair |
| 18 | Baking Soda (NaHCO ₃), 200 grams / bottle | 1 | bottle |
| 19 | Lye (NaOH), pellets, 100 grams / bottle, technical grade | 1 | bottle |
| 20 | Gentian Violet, 100 ml / bottle | 1 | bottle |
| 21 | Iodine Solution, 100 ml / bottle | 1 | bottle |
| 22 | Bromothymol blue, 100 ml / bottle | 1 | bottle |
| 23 | Oil, vegetable, 100 ml / bottle | 1 | bottle |
| 24 | Yeast, powder, 100 grams / bottle | 1 | bottle |
| 25 | Benedict's Solution, 100ml/bottle | 1 | bottle |
| 26 | Plant Cell Chart, tarpaulin, 660mm x 500mm | 1 | pc |
| 27 | Animal Cell Chart, tarpaulin, 660mm x 500mm | 1 | pc |
| 28 | Development of an Embryo Chart, tarpaulin, 660mm x 500mm | 1 | pc |
| 29 | Mendel's Law Charts: | | |
| | 29.1) Monohybrid Cross Chart, tarpaulin, 660mm x 500mm | 1 | pc |
| | 29.2) Dihybrid Cross Chart, tarpaulin, 660mm x 500mm | 1 | pc |
| 30 | Gene Map of the Human Chromosome, tarpaulin, 660mm x 500mm | 1 | pc |
| 31 | Food Pyramid Chart, tarpaulin, 660mm x 500mm | 1 | pc |
| 32 | Flowers and Seed Structure Chart, tarpaulin, 660mm x 500mm | 1 | pc |
| 33 | Safety Goggles | 5 | pair |
| 34 | Storage Cabinet, 1200mm x 600mm x 2000mm | 2 | unit |
| 35 | Test Tube, Ø 16mm x 150mm long | 30 | pc |
| 36 | Evaporating Dish, 75 ml. capacity | 10 | pc |
| 37 | Glass Funnel, Ø 50mm (Top Inside Diameter), 75mm long Stem | 5 | pc |
| 38 | Petri Dish | 10 | pc |
| 39 | Beaker, 250 ml., borosilicate | 10 | pc |
| 40 | Alcohol Thermometer, -20°C to 110°C | 5 | pc |
| 41 | Glass Slides, 100's/box | 5 | box |
| 42 | Glass Cover Slips, 100's/box | 5 | box |
| 43 | Graduated Cylinder, 100 ml., borosilicate | 10 | pc |
| 44 | Erlenmeyer Flask, 250 ml., borosilicate | 10 | pc |
| 45 | Stirring Rod, Ø 8mm x 250mm long | 5 | pc |
| 46 | Alcohol Burner, glass, 120 ml capacity | 5 | pc |
| 47 | Graduated Cylinder, 10 ml., borosilicate | 10 | pc |
| 48 | Watch Glass, Ø 90mm | 10 | pc |
| 49 | Mortar and Pestle, 300 ml. capacity | 5 | set |
| 50 | Syringe, plastic, 30 ml. | 5 | pc |
| 51 | Wash Bottle, plastic, 250 ml. | 10 | pc |
| 52 | Medicine Dropper, 2 ml. capacity | 15 | pc |
| | 3) Chemistry: | | |
| 1 | Alcohol Thermometer, -20°C to 110°C | 5 | pc |
| 2 | Graduated cylinder, 10 ml cap, borosilicate | 5 | pc |
| 3 | Graduated Cylinder, 100 ml., borosilicate* | 5 | pc |
| 4 | Test Tube, Ø16mm x 150mm long | 30 | pc |
| 5 | Wire Gauze, 140mm x 140mm (minimum) | 5 | pc |

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| PARTICULARS | | |
|-------------|--|---------------|
| ITEMS | Qty per School | Unit of Issue |
| 6 | Stirring Rod, ϕ 6mm x 250mm long | 5 pc |
| 7 | Evaporating Dish, 75 ml. capacity | 5 pc |
| 8 | Electrolysis Apparatus, Hoffman-type | 5 set |
| 9 | Alcohol Burner, glass, 60 ml. capacity | 5 pc |
| 10 | Watch Glass, ϕ 90mm | 5 pc |
| 11 | Distilling Flask, 250 ml. | 5 pc |
| 12 | Volumetric Flask, 250 ml. | 5 pc |
| 13 | Erlenmeyer Flask, 250 ml., borosilicate | 5 pc |
| 14 | Beaker, 500 ml, borosilicate | 5 pc |
| 15 | Beaker, 250 ml, borosilicate | 20 pcs |
| 16 | Beaker, 100 ml, borosilicate | 5 pc |
| 17 | Beaker, 50 ml, borosilicate | 10 pc |
| 18 | Reagent Bottle, narrow mouth amber color (250 ml. capacity) | 5 pc |
| 19 | Reagent Bottle, wide mouth colorless (250 ml. capacity) | 5 pc |
| 20 | Glass Funnel, ϕ 50mm (Top inside Diameter), length of stem, 75mm | 5 pc |
| 21 | Cork Borers, 4mm to 20mm OD, 12's/set | 1 set |
| 22 | Burette, 25 ml Capacity (acid) | 1 pc |
| 23 | Burette, 25 ml Capacity (base) | 1 pc |
| 24 | Glass Tubing, ϕ 6mm x ϕ 4mm x 1220mm long | 1 lb |
| 25 | Vial, ϕ 6mm x 50mm long | 25 pc |
| 26 | Hydrometer for light liquids | 5 pc |
| 27 | Hydrometer for heavy liquids | 5 pc |
| 28 | Condenser, Liebig-type | 1 set |
| 29 | Graduated Pipette, 10 ml. Capacity | 1 pc |
| 30 | Balance, Triple-Beam, 2610-gram capacity | 2 unit |
| 31 | Spatula, porcelain | 5 pc |
| 32 | Mortar and Pestle, 150 ml. capacity | 5 set |
| 33 | Calorimeter | 5 pc |
| 34 | Bunsen Burner, gas-type | 2 unit |
| 35 | LPG tank with gas, 11 kg. capacity | 1 unit |
| 36 | Osmosis Apparatus | 1 unit |
| 37 | Electrical Conductivity Apparatus | 1 unit |
| 38 | pH Meter, range: 0 to 14 pH | 1 unit |
| 39 | Open U-tube Manometer (and Accessories) | 1 unit |
| 40 | Sulfuric Acid, 500 ml / bottle, technical grade | 1 bottle |
| 41 | Activated Carbon, 100 grams / bottle | 1 bottle |
| 42 | Water Ammonia, 100 ml / bottle | 1 bottle |
| 43 | Boric Acid, 100 grams / bottle | 1 bottle |
| 44 | Calcium Chloride, 100 grams / bottle | 1 bottle |
| 45 | Copper Sulfate, CuSO_4 , 100 grams / bottle | 1 bottle |
| 46 | Hydrochloric Acid, HCl, technical grade, 500 ml / bottle | 1 bottle |
| 47 | Lye (NaOH), odorless white semi-transparent solids, 250 grams / bottle | 1 bottle |
| 48 | Sodium sulfate, 100 grams / bottle | 1 bottle |
| 49 | Magnesium Ribbon, minimum of 1 meter/roll | 1 roll |
| 50 | Potassium Iodide, KI, 100 grams / bottle | 1 bottle |
| 51 | Sulfur Powder, 100 grams / bottle | 1 bottle |
| 52 | Zinc Chloride, ZnCl_2 , 100 grams / bottle | 1 bottle |
| 53 | Zinc Pellets, 100 grams / bottle | 1 bottle |
| 54 | Ferric chloride, 100 grams / bottle | 1 bottle |
| 55 | Manganese Dioxide, 50 grams / bottle | 1 bottle |
| 56 | Ferrous Sulfate, 100 grams / bottle | 1 bottle |
| 57 | Glycerine, 500 ml / bottle | 1 bottle |
| 58 | Potassium Chloride, 100 grams / bottle | 1 bottle |
| 59 | Zinc Nitrate, 100 grams / bottle | 1 bottle |
| 60 | Lead Nitrate, 100 grams/bottle | 1 bottle |
| 61 | Ammonium Chloride, 100 grams/bottle | 1 bottle |
| 62 | Phenolphthalein Indicator, 100 grams/bottle | 1 bottle |
| 63 | Litmus Paper Strips, blue, 100's/vial | 1 vial |
| 64 | Litmus Paper Strips, red, 100's/vial | 1 vial |
| 65 | Universal pH Paper, ph 0-14, 100 strips/ pack | 1 pack |
| 66 | Filter Paper, ordinary, 24" x 24" sheet | 25 sht |
| 67 | Rubber stopper for ϕ 16mm test tube | 5 pc |
| 68 | Rubber stopper for 250 ml Erlenmeyer flask, with 1 hole | 5 pc |
| 69 | Rubber stopper for 250 ml Erlenmeyer flask, with 2 holes | 5 pc |
| 70 | Cork stopper for 250 ml Erlenmeyer flask, with 1 hole | 5 pc |

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| PARTICULARS | | | |
|-------------|--|----------------|---------------|
| | ITEMS | Qty per School | Unit of Issue |
| 71 | Cork stopper for 250 ml Erlenmeyer flask, with 2 holes | 5 | pc |
| 72 | Cork stopper for Ø 16mm test tube | 5 | pc |
| 73 | Chart on Periodic Table of Elements, tarpaulin, 36" x 72" | 1 | pc |
| 74 | Poster on Laboratory Safety Rules, 30" x 40", tarpaulin, wall mount | 1 | pc |
| 75 | Poster on Basic Laboratory Apparatuses, 30" x 40", tarpaulin | 1 | pc |
| 76 | Laser Pointer, dual-function, with dry cells | 5 | pc |
| 77 | Hand Gloves, acid/solvent-resistant, super nitrile | 5 | pair |
| 78 | Safety Goggles | 5 | pair |
| 79 | Test Tube Brush | 5 | pc |
| 80 | Rubber Tube, Ø 10mm x Ø 8mm x 2000 mm long, Latex | 5 | lengths |
| 81 | Syringe, 5 ml. Capacity, plastic | 5 | pcs |
| 82 | Storage Cabinet for corrosive materials | 1 | unit |
| 83 | Storage Cabinet for non-corrosive materials | 1 | unit |
| 84 | Triangular File, 6" long, with handle | 5 | pc |
| 4) Physics: | | | |
| 1 | Archimedes Principle Apparatus | 5 | set |
| 2 | Open U-tube Manometer (and Accessories) | 1 | unit |
| 3 | Air Blower, variable speed control | 1 | unit |
| 4 | Miniature Light Bulb, 1.35 to 2.5 V, 0.06 A or greater handling current, 3 pcs/set | 5 | set |
| 5 | Miniature Light Bulb Base (Socket), 3 pcs/set, with baseboard & binding posts | 5 | set |
| 6 | Dry Cell Holder, for single size D dry cell, 4 pcs/set | 5 | set |
| 7 | Set of Connectors. | | |
| | 7.1) AWG # 22, black, 300mm long with alligator clip and banana plug on ends | 15 | pc |
| | 7.2) AWG # 22, red, 300mm long with alligator clip and banana plug on ends | 15 | pc |
| | 7.3) AWG # 22, white, 300mm long with banana plugs on both ends | 10 | pc |
| | 7.4) AWG # 22, blue, 300mm long with banana plugs on both ends | 10 | pc |
| 8 | Resistance Box | 5 | set |
| 9 | Switch, knife-type | 5 | unit |
| 10 | DC Ammeter | 5 | unit |
| 11 | DC Voltmeter | 5 | unit |
| 12 | Galvanometer | 5 | unit |
| 13 | Set of Coils | 5 | set |
| 14 | Motor-Generator Model Experiment Set | 5 | set |
| 15 | Set of Tools | 1 | set |
| | 15.1) Screwdriver, flat, 6" | 1 | pc |
| | 15.2) Screwdriver, phillips, 6" | 1 | pc |
| | 15.3) Long Nose Pliers, 6" | 1 | pr |
| | 15.4) Mechanical Pliers, 6" | 1 | pr |
| | 15.5) Soldering Iron, 60 watts | 1 | pc |
| | 15.6) Ball Peen Hammer, length including handle is 11", 300-350 grams | 1 | pc |
| | 15.7) Precision Screwdrivers Set, 6 pcs, with plastic casing | 1 | set |
| | 15.8) Tweezers, stainless steel, with curved tips, 6 1/2" long | 1 | pr |
| | 15.9) Diagonal Cutters, 6" | 1 | pr |
| | 15.10) Soldering Wire, Ø1mm, Grade 60/40, WL: 1 lb/spool | 1 | spool |
| | 15.11) Soldering Paste, 50 grams/can | 1 | can |
| 16 | Advanced Electromagnetism Kit | 5 | kit |
| 17 | Basic Electronics Kit | 5 | kit |
| 18 | Fuse Holder with Fuse | 5 | pc |
| 19 | Variable Power Supply, AC-DC | 5 | set |
| 20 | Tuning Fork Set (set of 8 tuning forks) | 1 | set |
| 21 | Resonance Tube Set, open-ended | 5 | set |
| 22 | Sound Signal Generator Kit | 5 | unit |
| 23 | Loudspeaker, ≥ 1 watt, all frequency or low range, 4-8 Ohms | 5 | unit |
| 24 | Slinky Coil, metal, Ø3" x 4" long | 5 | pc |
| 25 | DC String Vibrator with String | 1 | unit |
| 26 | Musical Instrument (Ukulele) | 1 | unit |
| 27 | Basic Lens Set (set of 7 lenses) | 5 | set |
| 28 | Mirror Set (set of 3 mirrors) | 5 | set |
| 29 | Prism, right-angle, acrylic, 28 x 38 x 75mm | 5 | pc |
| 30 | Refraction Blocks (1 set is composed of 1 pc Glass & 1 pc Acrylic) | 5 | set |
| 31 | Refraction Tank | 5 | unit |
| 32 | Student Optical Bench Set with Meterstick | 5 | set |
| 33 | Multimeter | 5 | unit |
| 34 | Beaker, 500 ml, polypropylene plastic | 5 | pc |

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| PARTICULARS | | | |
|------------------------------------|--|----------------|---------------|
| | ITEMS | Qty per School | Unit of Issue |
| 35 | Florence Flask, 250 ml., polymethylpentene | 5 | pc |
| 36 | Chart on Electromagnetic Spectrum, 760mm x 1000mm, tarpaulin | 1 | pc |
| 37 | Chart on Radioactive Elements, 1000mm x 1500mm, tarpaulin | 1 | pc |
| 38 | Dry Cell, 1.5 V, size D, ISO Certified | 20 | pc |
| 39 | Dry Cell, 9 V, ISO Certified | 5 | pc |
| 40 | Logic Gates Trainer Kit | 5 | unit |
| 41 | Storage Cabinet | 2 | unit |
| 42 | Balance, Triple-Beam | 1 | unit |
| 43 | Basic Radioactivity Kit | 1 | set |
| B. HIGH SCHOOL MATHEMATICS: | | | |
| B.1) Mass Production Item: | | | |
| 1 | Spring Balance, 10-Newton | 1 | pc |
| B.2) Market Items: | | | |
| 1) Math 1 | | | |
| 1 | Meterstick, plastic | 1 | pc |
| 2 | Push/Pull Steel Tape Rule, 10 meters | 5 | pc |
| 3 | Litre set (1/4, 1/3, 1/2, 2/3, 3/4, & 1 litre measuring cups), plastic | 5 | set |
| 4 | Litre set (Medicine Droppers, 1ml - 5ml) | 5 | set |
| 5 | Utility kitchen/spring scale, 1 kg cap. | 1 | pc |
| 6 | Beam Balance, double platform, 2000-gram capacity | 1 | unit |
| 7 | Sundial | 1 | pc |
| 8 | Model of $(x+y)^3$ | 1 | set |
| 9 | Blackboard Protractor, semi-circular, 180°, Ø 600mm, wooden | 1 | pc |
| 10 | Simple Calculator | 5 | unit |
| 11 | Stopwatch, digital | 5 | unit |
| 12 | Thermometer, clinical type, °C and °F scale (dual scale) | 10 | pc |
| 13 | 60-minute Hour Glass Timer | 1 | pc |
| 14 | Storage Cabinet, 4-layer | 1 | unit |
| 2) Math 2 | | | |
| 1 | Probability Kit for Binomial Distribution and Pascal's Triangle | 1 | pc |
| 2 | Meterstick Plastic | 1 | pc |
| 3 | Graphing board, 1m x 1m, green | 1 | pc |
| 4 | Dice, plastic, 25.4mm cube | 12 | pc |
| 5 | Stopwatch, digital | 1 | unit |
| 6 | Scientific Calculator | 10 | unit |
| 3) Math 3 | | | |
| 1 | Geoboard, square and circle, 5 x 5 | 5 | pc |
| 2 | Geoboard, square and circle, 11 x 11 | 5 | pc |
| 3 | Model of cutout triangle, wood, assorted sizes | 1 | set |
| 4 | Model to show the altitude of Triangle, wood, assorted sizes | 1 | set |
| 5 | Model of angle sum theorem, wood, assorted sizes | 1 | set |
| 6 | Geometrical model set, 3 types of prisms, assorted sizes | 10 | set |
| 7 | Geometrical model set, 3 types of pyramids, assorted sizes | 10 | set |
| 8 | Geometrical model set, 2 types of cones, assorted sizes | 10 | set |
| 9 | Geometrical model set, 2 types of cylinders, assorted sizes | 10 | set |
| 10 | Geometrical model set, Spheres, assorted sizes | 10 | set |
| 11 | Surface area of Geometrical set, collapsible, 3 types of prisms, assorted sizes | 10 | set |
| 12 | Surface area of Geometrical set, collapsible, 3 types of pyramids, assorted sizes | 10 | set |
| 13 | Surface area of Geometrical set, collapsible, 2 types of cones, assorted sizes | 10 | set |
| 14 | Surface area of Geometrical set, collapsible, 2 types of cylinders, assorted sizes | 10 | set |
| 15 | Surface area of Geometrical set, collapsible, Spheres, assorted sizes | 10 | set |
| 16 | Model of Rectangular solid | 10 | set |
| 17 | Model of Pyramid in a prism (volume of pyramid), assorted sizes | 1 | set |
| 18 | Model of Cone in a cylinder (volume of cone), assorted sizes | 1 | set |
| 19 | Model of sphere in a cylinder (vol. of sphere), assorted sizes | 1 | set |
| 20 | Blackboard Compass, 600mm long, wooden | 1 | pc |
| 21 | Blackboard protractor, semi-circular, 180°, Ø 600mm, wooden | 1 | pc |
| 22 | Meterstick, plastic | 1 | pc |
| 23 | Graphing board, 1m x 1m, green | 1 | pc |
| 24 | Storage Cabinet, 4-layer | 1 | unit |
| 4) Math 4 | | | |
| 1 | Blackboard Compass, wooden, 600mm long | 1 | pc |
| 2 | Blackboard protractor, 180°, Ø 600mm, semi-circular, wooden | 1 | pc |
| 3 | Meterstick, plastic | 1 | pc |
| 4 | Graphing board, 1m x 1m, green | 1 | pc |

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| PARTICULARS | | |
|---|----------------|---------------|
| ITEMS | Qty per School | Unit of Issue |
| II. ELEMENTARY SCHOOL: | | |
| A. ELEMENTARY SCIENCE: | | |
| 1 Air Convection Box | 1 | sets |
| 2 Alcohol Burner, 120 ml | 5 | pcs |
| 3 Anemometer with Wind Vane | 1 | unit |
| 4 Aneroid Barometer | 1 | set |
| 5 Beam Balance, double platform | 5 | sets |
| 6 Celestial Globe | 1 | pcs |
| 7 Human Circulatory System Model | 1 | set |
| 8 Compound Microscope | 1 | set |
| 9 Connecting Wires (w/ alligator clips at ends): | | |
| 9.1) AWG # 22 Connecting Wire w/ alligator clips at ends | 5 | pcs |
| 9.2) AWG # 22 Connecting Wire w/ alligator clips at ends | 5 | pcs |
| 9.3) AWG # 22 Connecting Wire w/ alligator clips at ends | 5 | pcs |
| 9.4) AWG # 22 Connecting Wire w/ alligator clips at ends | 5 | pcs |
| 10 Human Digestive Model | 1 | pc |
| 11 Dry Cell Holder | 5 | pcs |
| 12 Cart-Rail System (includes Dynamics Carts, Rails, Motorized Cart, Leveling Pad Assembly, Stopper-Fork Assembly, 50-gram Masses, 3-gram Masses, etc.) | 5 | sets |
| 13 Human Ear Model | 1 | pc |
| 14 Human Endocrine Model | 1 | pc |
| 15 Human Eye Model | 1 | pc |
| 16 Friction Apparatus | 5 | sets |
| 17 Safety Goggles | 5 | pcs |
| 18 Hand Lens | 5 | pcs |
| 19 Heat Conduction Different Metals | 5 | sets |
| 20 Height Scale | 1 | pc |
| 21 Inclined Plane Stand | | |
| 21.1) Stand Base Assembly | 10 | assy |
| 21.2) Stand Support | 10 | pcs |
| 21.3) Multiclamp Assembly | 10 | assy |
| 21.4) \varnothing 9.5mm x 500mm long Stand Rod | 5 | pcs |
| 21.5) \varnothing 12.7mm x 1000mm long Stand Rod | 5 | pcs |
| 22 Layers of the Earth Model | 1 | set |
| 23 Lever Assembly | 5 | assy |
| 24 Liquid Convection | 5 | pcs |
| 25 Human Lung and Chest Model | 1 | pc |
| 26 Magnetic Compass | 5 | pcs |
| 27 Coral Reefs, Model | 1 | pc |
| 28 Model of Invertebrates (insects, spiders, worms) | 1 | set |
| 29 Model of Vertebrates (mammals, birds, reptiles, amphibians, fish) | 1 | set |
| 30 Mortar and Pestle, porcelain | 6 | sets |
| 31 Human Mouth and its part model | 1 | pc |
| 32 Multimeter | 1 | pc |
| 33 Human Muscular Model | 1 | pc |
| 34 Human Nervous System Model | 1 | pc |
| 35 Human Nose Model | 1 | pc |
| 36 Ordinary Globe | 3 | pcs |
| 37 Bar Magnets | 5 | pairs |
| 38 Penlight, 3 V, plastic case | 5 | pcs |
| 39 Meterstick, plastic | 5 | pcs |
| 40 Prepared Slides of Algae, moss, etc. | 10 | specimens |
| 41 Double Pulley Assembly | 5 | assy |
| 42 Single Pulley Assembly | 5 | assy |
| 43 Relief/Terrestrial Globe | 1 | pcs |
| 44 Human Reproductive System Model | 1 | set |
| 45 Human Respiratory System Model | 1 | set |
| 46 Rock Samples with box casing | 1 | set |
| 47 Sand Table | 1 | pc |
| 48 Human Skeletal System Model | 1 | set |
| 49 Human Skin Model | 1 | unit |

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| PARTICULARS | | | |
|-----------------------------------|---|----------------|---------------|
| | ITEMS | Qty per School | Unit of Issue |
| 50 | Slinky Coil | 6 | pcs |
| 51 | Specimen of Different Kinds of Soils | 5 | sets |
| 52 | Spring Balance Assembly | 5 | assy |
| 53 | Sun-Earth-Moon Model | 1 | unit |
| 54 | Switch, single-pole, knife-type | 3 | pcs |
| 55 | Telescope, astronomical | 1 | unit |
| 56 | Test Tube Holder | 10 | pcs |
| 57 | Test Tube Rack | 5 | pcs |
| 58 | Human Tongue Model | 1 | pc |
| 59 | Triangular Prism, right-angle, 28mm x 38mm x 75mm | 5 | pcs |
| 60 | Tuning Forks Set | 1 | set |
| 61 | Human Urinary System Model | 1 | set |
| 62 | Weighing Scale | 1 | unit |
| 63 | Wet Cell Kit | 1 | sets |
| 64 | Alcohol Thermometer -20°-110° C | 5 | pcs |
| 65 | Beaker, 250 mL | 5 | pcs |
| 66 | Thermometer, clinical-type, dual scale | 3 | pcs |
| 67 | Medicine Dropper, 2 ml capacity | 1 | box |
| 68 | Glass Funnel, 75mm long Stem | 5 | pcs |
| 69 | Graduated Cylinder, 10 mL | 5 | pcs |
| 70 | Graduated Cylinder, 25 mL | 5 | pcs |
| 71 | Graduated Cylinder, 100 mL | 5 | pcs |
| 72 | Test Tube, 25 mL | 30 | pcs |
| 73 | Flashlight Bulb, 2.5 volts, screw-type | 25 | pcs |
| 74 | Flashlight Bulb Socket, screw-type | 25 | pcs |
| 75 | Glass Slides, 100's/box | 1 | box |
| 76 | Glass Cover Slips, 100's/box | 1 | box |
| 77 | Hand Gloves, acid resistant, super-nitrile | 5 | pairs |
| 78 | Litmus Paper Strips, Blue, 100's/vial | 1 | vial |
| 79 | Litmus Paper Strips, Red, 100's/vial | 1 | vial |
| 80 | Magnet Wire, # 22 | 0.5 | kg |
| 81 | Denatured Alcohol | 1 | gal |
| 82 | Iodine Solution | 1 | litre |
| 83 | Chart of Different Weather Conditions | 1 | pc |
| 84 | Chart Phases of the Moon | 1 | pc |
| 85 | Chart of Different Characteristics of Planets in the Solar System | 1 | pc |
| 86 | Chart on Precautionary Measures Before and After a Storm | 1 | pc |
| 87 | Height and Weight Growth Chart | 1 | pc |
| 88 | Map of Philippine Volcanoes, 22" x 35", tarpaulin | 1 | pc |
| 89 | Poster of Astronomical Instruments | 1 | pc |
| 90 | Poster of Cloud Formation | 1 | pc |
| 91 | Poster of Filipino Scientists with their Contribution to Science | 1 | pc |
| 92 | Poster on Laboratory Techniques | 1 | pc |
| 93 | Map of Stars, 36" x 36", tarpaulin | 1 | pc |
| 94 | Weather Chart, 22" x 35", tarpaulin | 1 | pc |
| 95 | Map of Philippine Climates, 22 x 35", tarpaulin | 1 | pc |
| 96 | Storage Cabinet | 1 | unit |
| B. ELEMENTARY MATHEMATICS: | | | |
| 1 | Abacus | 20 | pcs |
| 2 | Building Blocks, different colors | 100 | pcs |
| 3 | Hundreds Board | 20 | pcs |
| 4 | Cuisenaire | 20 | pcs |
| 5 | Dice, big size | 2 | pcs |
| 6 | Dice, standard size (for Student) | 20 | pcs |
| 7 | Domino Set | 10 | sets |
| 8 | Number Blocks (@ 15 pcs/set) | 10 | sets |
| 9 | Number Line Board, blackboard | 1 | pc |
| 10 | Number Line Board, student | 5 | pcs |
| 11 | Addition-Subtraction-Multiplication-Division Wheel | 3 | pcs |
| 12 | Place Value Box (with 4 colors counting bars) | 3 | pcs |
| 13 | Place Value Board | 3 | pcs |
| 14 | Fraction Set | 3 | sets |
| 15 | Fraction Wheel | 3 | pcs |

| PARTICULARS | | | |
|-------------|--|----------------|---------------|
| | ITEMS | Qty per School | Unit of Issue |
| 16 | Disectable Decimal Cube Set | 10 | pcs |
| 17 | Tangrams | 20 | sets |
| 18 | Template, shapes | 20 | pcs |
| 19 | Protractor, blackboard, semi-circular, wooden | 1 | pc |
| 20 | Compass, blackboard, wooden | 1 | pc |
| 21 | Geoboard, square on one face & circular on the other face, plastic | 20 | pcs |
| 22 | Cut-out Triangles (Right, Isosceles, & Equilateral) | 1 | set |
| 23 | Solids for spatial figures: Pyramid, Cone, Sphere, Prism, Cylinder | 3 | sets |
| 24 | Collapsible Solids (Pyramid, Cube, Prism) | 3 | sets |
| 25 | Geostrips | 10 | sets |
| 26 | Clock Model, manipulative-type | 1 | pc |
| 27 | Digital Clock, table | 1 | units |
| 28 | Stopwatch, digital | 5 | pcs |
| 29 | Meterstick | 5 | pcs |
| 30 | Right Triangle, 45° x 45° x 90°, blackboard | 1 | pcs |
| 31 | Right Triangle, 30° x 60° x 90°, blackboard | 1 | pcs |
| 32 | Tape Measure | 5 | pcs |
| 33 | Beam Balance, double-platform | 5 | units |
| 34 | Weighing Scale, analog | 1 | units |
| 35 | 5-Newton Spring Balance | 5 | units |
| 36 | Square Units, 10 cm x 10 cm (exact measurement) | 20 | pcs |
| 37 | Square Units, 20 cm x 20 cm (exact measurement) | 20 | pcs |
| 38 | Frames of Solids: Cube, Cylinder, and Pyramid | 10 | sets |
| 39 | Box Frame Skeleton with plastic cubes | 10 | sets |
| 40 | Manipulative Electric Meter Model, blackboard | 5 | pcs |
| 41 | Water Meter Board | 5 | pcs |
| 42 | Graphing Board, 1m x 1m, green | 1 | pcs |
| 43 | Simple Calculator (for Teacher) | 1 | unit |
| 44 | Simple Calculator (for Student) | 10 | units |
| 45 | Pocket Chart | 1 | pc |
| 46 | Alcohol Thermometer | 10 | pcs |
| 47 | Graduated Cylinder, 100 ml | 10 | pcs |
| 48 | Beaker, 500 ml | 10 | pcs |
| 49 | Graduated Cup | 10 | pcs |
| 50 | Measuring Spoon | 10 | pcs |
| 51 | Plastic Containers (of different sizes) | 10 | pcs |
| 52 | Beads, Ø16mm, colors: white, black, blue, red, & yellow | 500 | pcs |
| 53 | Plastic Sticks, assorted colors | 1000 | pcs |
| 54 | Plastic Chips, Ø 25mm, colors: white, blue, and red | 150 | pcs |
| 55 | Spindles, plastic, colors: white, black, blue, red, & yellow | 250 | pcs |
| 56 | Ruler, 12" or 300 mm capacity | 10 | pcs |
| 57 | Protractor, student, semi-circular, 180°, Ø150mm | 10 | pcs |
| 58 | Flash Cards, operations: Add, Subtract, Multiply, & Divide | 12 | sets |
| 59 | Window Cards, operations: Add, Subtract, Multiply, & Divide | 12 | sets |
| 60 | Number Chart | 3 | pcs |
| 61 | Multiplication Chart | 3 | pcs |
| 62 | Fraction Chart | 3 | pcs |
| 63 | Place Value Chart (Decimal) | 3 | pcs |
| 64 | Conversion Charts, types of measure: linear, mass, area, & volume | 2 | pcs |
| 65 | Storage Cabinet | 1 | units |