



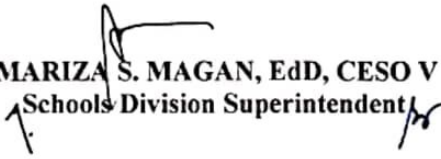
Republic of the Philippines
Department of Education
Region VIII
SCHOOLS DIVISION OF TACLOBAN CITY
Tacloban City

June 27, 2022

DIVISION MEMORANDUM

No. 307 s. 2022

TO: Assistant Schools Division Superintendent
Chief, Curriculum Implementation Division
Education Program Supervisors
Public Schools District Supervisors
JHS/SHS School Heads
All other concerned

FROM:  **MARIZA S. MAGAN, EdD, CESO V**
Schools Division Superintendent

SUBJECT: PROCUREMENT OF SCIENCE, MATHEMATICS AND TECHNICAL EDUCATIONAL LIVELIHOOD LEARNING TOOLS AND EQUIPMENT

1. The provision of Science , Mathematics Equipment(SME) and Technical Vocational & Livelihood (TVL) Learning Tools and Equipment to public schools is of utmost importance to maximize learning in Science and Mathematics subjects, and the development of Technical Vocational Skills among the learners. This will also help them to pass the Technical Education and Skills Development Authority (TESDA) for National Certificate (NC) for the possibility of employment.

2. The Schools Division of Tacloban City, through the Office of Budget/Accounting section received the following Sub Allotment Release Order (SARO) from the Office of the Undersecretary for Finance, to wit:

- 2.1 SARO No. OSEC 8 22 0132 to cover funding requests for the procurement of Science and Mathematics Equipment Packages for Public Junior and Senior High School for S.Y. 2022
- 2.2 SARO No. OSEC 8 22 0332 to cover funding requirement for the procurement of learning tools and equipment for Science, Mathematics and Technical Vocational Livelihood.

3. The allotment of amount to recipient schools were based on the listing in the Enhanced Basic Education Information System enrolment for S.Y. 2022 which will be downloaded to schools (see attachment No.1)

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4. Suggested eligible SME and TVL tools are contained in an enclosure with no consumable items such as chemical reagents are contained in an enclosure . (see attachment No.2).

5. Immediate dissemination of and strict compliance with this Memorandum is directed.



RELEASED
Date: 6/28/2022

Suggested List of Learning Tools and Equipment

A. Mathematics Learning Tools & Equipment:

1. Tablet (for Learners) with specifications

REAL ME PAD

Specs:

10.4-inch WUXGA+ (1200 x 2000) IPS display

MediaTek Helio G80 processor

Mali-G52 MC2 GPU

4GB, 6GB RAM

64GB, 128GB storage

8MP main rear camera

8MP selfie camera

4G LTE (LTE variants)

Wi-Fi 802.11 a/b/g/n/ac

Bluetooth 5.0

A-GPS, GLONASS, BDS

3.5mm audio jack

Quad Speakers

Dolby Atmos

Hi-Res Audio Certification

USB Type-C

7,100mAh battery with 18W fast charging

246.1 x 155.9 x 6.9 mm

440 g

Gray, Gold

2. Scientific Calculator

Casio Fx-991EX CLASSWIZ Scientific Calculator

Specifications:

552 functions

Icon menu

Spreadsheet

QR code function

Solving equations and systems of up to four equations

4X4 matrices

Vector calculations

Integration calculations

Differential calculations

Probability distribution

Calculation with technical symbols

Undo-Function

Complex number calculation

Base-N calculations

Equation calculations

Inequality calculation

SUM calculation

47 scientific constants

40 metric conversions

Automatic parenthesis

24 Parentheses level

Variable memory (9)

Trigonometric and Inverse Trigonometric functions

Handwritten marks: a checkmark, a vertical line, and a small symbol.

Hyperbolic and Inverse hyperbolic functions
 Power / Power Root calculations
 logarithmic calculations
 Exponential calculations
 Root calculations
 Combinatoric and Permutation
 Prime factorization
 Random Integer
 Conversion of polar coordinates into rectangular coordinates and inverse
 Fraction (two modes)
 Conversion of sexagesimal into decimal and inverse
 Calculates in Degree, Grad and Radian
 Function table
 Shift-Solve Function
 Display: "Natural Textbook Display" Natural V.P.A.M.
 High-Resolution LC-Display, 63 x192 dots, 16/10 + 2 digits
 Natural-V.P.A.M. – Natural display
 Energy supply: Solar + Battery (1xLR44)

3. Graphing Board
4. Protractor, compass
5. Geometric blocks
6. VCD Math Lessons

B. Science Learning Tool / Equipment

Bar Magnets	Concave Lens
Convex Lens	Tripod
Wire Gauze	Stirring Rod
Laboratory Thermometer	Lab. Weighing Scale
Pipette (10 ml)	Petri Dish
Test Tube Holder	Dissecting Set
Digital Timer	Magnifying Glass
Erlenmeyer's Flask	Beaker (150 ml)
Graduated Cylinder	Graduated Cylinder (10 ml)
Graduated Cylinder (25 ml)	Test Tube Rack
U magnet	Evaporating Dish
Reagent Bottles	Distillation Sets
PH Meter	Laboratory Hot Plate
Cork Borer	Pendulum
Projectile/Spring Launcher	Multimeter
Circuit Boards	Electromagnetic Kits
Burette	Filter Paper
Slinky Spring	Mirrors
Earth Globe	Sun-Earth-Moon Model
Resistors	Capacitors
Bunsen Burners	Bunsen Burner, gas type

C. Technical Vocational Livelihood Learning tools / Equipment

1. Arc Welding Machine AC/DC 300 AMP. (YAMATO) w/ accessories
- Portable Disk Grinder (MAKITA)
- Electric Drill
- Portable Grinder
- Motion sensors (by Set)
- Clamp-on meter
- Insulation Resistance Tester
- Labelling Machine
- Fire Extinguisher KGS ABC

Handwritten signature and initials, possibly 'R' and '71'.

Working Table
Heavy Duty Stand Mixer
Handheld Electric Mixer
Cooktop/Range
Full gas tank w/ hose and regulator
Wooden Spoon
Saucepan
Cooking Pan
Kitchen Scale
Bread Knife
Cooling Rack
Bowl/Ramikens
Bowl
Serving Plate
Cake Decorating Turntable
Ensaymada/Brioche Mold
Steamer
Handheld Sifter
Blender

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5
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