

- JANUARY**
Makugihon
- FEBRUARY**
Mahigugmaon
- MARCH**
Matinabunon
- APRIL**
Matinahuron
- MAY**
Mahapsay og Malimpyo
- JUNE**
*Maabtik og Masunod sa
Dhaklong Orus*
- JULY**
Maantigo og Maabilidad
- AUGUST**
*Maginhuhunon
para sa Urban*
- SEPTEMBER**
Madaginaton
- OCTOBER**
Matinud-anon
- NOVEMBER**
Masaligan
- DECEMBER**
Maalampon



Republic of the Philippines
Department of Education
 Regional Office IX, Zamboanga Peninsula



4



MATHEMATICS

4th QUARTER – Module 5: DATA COLLECTION, ORGANIZATION AND PRESENTATION



Name of Learner: _____

Grade & Section: _____

Name of School: _____

Mathematics – Grade 4
Alternative Delivery Mode
Quarter 4 - Module 5: Data Collection, Organizes and Presentation
First Edition, 2020

Republic Act 8293, section 176 states that: No copyright shall subsist in any work of the Government of the Philippines. However, prior approval of the government agency or office wherein the work is created shall be necessary for exploitation of such work for profit. Such agency or office may, among other things, impose as a condition the payment of royalty.

Borrowed materials (i.e., songs, stories, poems, pictures, photos, brand names, trademarks, etc.) included in this module are owned by their respective copyright holders. Every effort has been exerted to locate and seek permission to use these materials from their respective copyright owners. The publisher and authors do not represent nor claim ownership over them.

Published by the Department of Education
Secretary: Leonor Magtolis Briones
Undersecretary: Diosdado M. San Antonio

Development Team of the Module	
Writer:	Lindsey R. Maghanoy
Editors:	Verna T. Cruzat Randal Jay M. Ramos
Reviewers: EPS Mathematics	Vilma A. Brown, Ed. D
Principal	Edlin H. Aizon
Management Team: SDS	Roy C. Tuballa, EMD, JD, CESO VI
ASDS	Jay S. Montealto, CESO VI
ASDS	Norma T. Francisco, DM, CESE
EPS Mathematics	Vilma A. Brown, Ed.D
EPS LRMS	Aida F. Coyme, Ed.D

Printed in the Philippines
Department of Education – Region IX, Zamboanga Peninsula
Office Address: Tiguma, Airport Road, Pagadian City
Telefax: (062) – 215 – 3751; 991 - 5975
E-mail Address: region9@deped.gov.ph

Introductory Message

This Self – Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussion are carefully stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide you step-by-step as you discover and understand the lesson prepared for you.

Pre-tests are provided to measure your prior knowledge on lessons in each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, notes to the Teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. And read the instruction carefully before performing each task.

If you have any questions in using this SLM or any difficulty in answer the tasks in this module, do not hesitate to consult your teacher or facilitator.

Thank you.



What I Need to Know

The module was written for the Grade Four learners and are expected to learn and develop the most learning competencies, different processes, numeracy skills at the end of the lessons which are fundamental to practical and real- life situation as emphasized in the curriculum.

After going through the module, you are expected to:

- Collect data on two variables using any source.
- Organize data in tabular form and presents them in a single / double horizontal or vertical bar graph.

In amidst of global health crisis, values and attitudes among learners are likewise encouraged for meaningful learning.



What I Know

Directions: Choose the letter that corresponds to your answer.

The table below shows the **numbers of chicken eggs gathered by Nestor** for five days.

DAY	CHICKEN EGGS GATHERED
Monday	25
Tuesday	40
Wednesday	30
Thursday	50
Friday	35

1. What was the least number of eggs gathered?
a. 50 eggs b. 40 eggs c. 35 eggs d. 25 eggs
2. How many days did Nestor gather the chicken eggs?
a. 5 days b. 4 days c. 3 days d. 2 days
3. How many more eggs were gathered on Tuesday than on Monday?
a. 15 eggs b. 20 eggs c. 25 eggs d. 30 eggs
4. How many chicken eggs were collected on Thursday and Friday?
a. 65eggs b. 75eggs c. 85eggs d. 95eggs
5. What was the total number of chicken eggs gathered in 5 days?
a. 150 eggs b. 160 eggs c. 170 eggs d. 180 eggs

LESSON

DATA COLLECTION, ORGANIZATION AND PRESENTATION



What's In

Directions: Read and study the collected data. Choose the letter of the correct answer. Write your answer on a separate sheet.

The City Health Officer of Zamboanga City donated boxes of face masks. The table below shows the collected data on the number of boxes of face masks donated in selected barangays.

Boxes of Facemasks Donated in Selected Barangays

NAMES OF BARANGAY	BOXES OF FACE MASK
Putik	34
Sta. Maria	29
Tetuan	32
Ayala	20
Divisoria	27
Baliwasan	31
Curuan	23
TOTAL	196

1. What was the data all about?
 - a. boxes of face masks donated in selected barangays
 - b. boxes of face shields donated in selected barangays
 - c. boxes of cottons donated in selected barangays
 - d. boxes of alcohol donated in selected barangays
2. Which barangay had the greatest number of boxes of face masks received?
 - a. Baliwasan
 - b. Tetuan
 - c. Putik
 - d. Divisoria
3. What barangay had the least number of boxes of face masks received?
 - a. Ayala
 - b. Baliwasan
 - c. Curuan
 - d. Sta. Maria

4. What was the total number of boxes of face masks given by the donor?
 - a. 194boxes
 - b. 195boxes
 - c. 195boxes
 - d. 196boxes

5. How many more boxes of face masks donated to Barangay Putik than Barangay Divisoria?
 - a. 9 boxes of facemask
 - b. 8 boxes of facemask
 - c. 7 boxes of facemask
 - d. 6 boxes of facemask



What's New

Directions: Read and study the collected data. Answer the questions that follows on a separate sheet.

Mario was asked by his teacher to survey his 30 classmates (15 boys and 15 girls) about their favorite rainbow colors. The table below shows the tally of the collected data.

FAVORITE COLORS

Colors	Tally	
	Boys	Girls
Red	2	4
Orange	2	2
Yellow	3	1
Green	1	2
Blue	4	2
Indigo	2	1
Violet	1	3
Total	15	15

1. What was the set of data all about?
2. What color got the highest choice among the girls? How about the boys?
3. What were the least favorite color of the boys? What about the girls?
4. Which color was the top choice of boys? What about for girls?
5. What is the second favorite color of boys? How about the girls?



What is It

Data is a collection of gathered information. It can be collected using survey and it can be tallied on a table to get them organized.

Problem Opener: The teacher made a survey of the favorite pets of boys and girls in her class. The table below shows the tally of the collected data.

Favorite Pets of Grade Four Pupils

Pet	Tally	Boys	Tally	Girls	Total
dog	III-III-I	11	III	4	15
cat	III	3	III-II	7	10
bird	III-II	7	III	3	10
fish	I	1	III-III	9	10
rabbit	III	3	III-II	7	10
Total		25		30	55

This table shows two variables: **the number of pets of boys** and **the number of pets of girls**. Let us answer the following questions.

1. What is the data all about?
2. What pet do most boys like?
3. How many boys like birds?
4. Which pet do most girls like?
5. Why do you like pets?

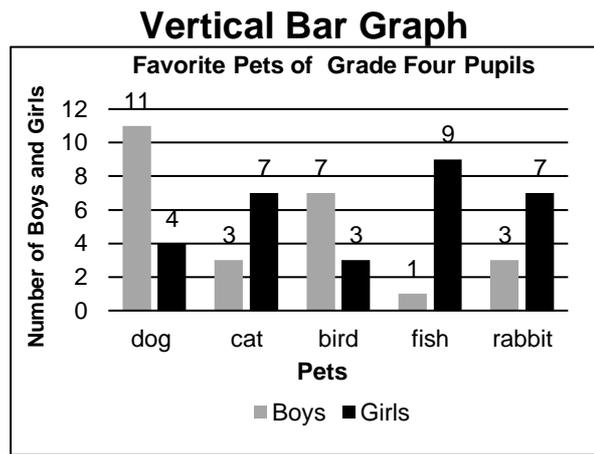
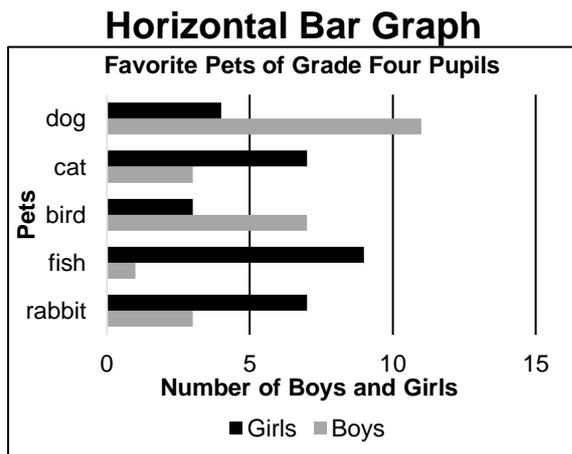
A **graph** tells a story about a data or information given. A **bar graph** is one way of presenting a set of data. It can either be **vertical** or **horizontal** in form. A **bar graph** can be used to show comparison of information. Organizing data in a tabular form is one of the ways to interpret data in one to two variables.

We can also represent the data about the favorite pets of the pupils using a bar graph.

To construct a horizontal and vertical bar graph, we follow these steps:

1. Decide what information to show in each axis (horizontal axis and vertical axis).
2. Draw and label the horizontal and vertical axes.
3. Draw each bar.
4. Choose a scale for each axis. Divide the axes into equal interval.

EXAMPLE:



What's More

Directions: Study the situation. The data gathered are presented below. Count and write the corresponding frequency and organize it on a vertical bar graph.

Enrollees at Maligaya Elementary School

Grade Level	Tally	Enrolment
Kindergarten	- - - - - - - - -	
Grade 1	- - - - - - - -	
Grade 2	- - - - - - -	
Grade 3	- - - - - - -	
Grade 4	- - - - - - - -	
Grade 5	- - - - - - - -	
Grade 6	- - - - - - -	
TOTAL		



What I Have Learned

Directions: Choose the appropriate word inside the box and fill in the blank to make the sentence complete.

Vertical or horizontal	Graph	Data	Bar graph
------------------------	-------	------	-----------

1. _____ can be collected using survey and it can be tallied on a table to get them organized.
2. _____ tells a story about a data or information given.
3. _____ is used to compare data from different groups.
- 4-5. Bar graphs can be _____ or _____.



What I Can Do

Directions: Use the information in the box. Present the data in a horizontal bar graph.

Number of Plastic Bottles Collected

GRADE	Total Number of Plastic Bottles Collected
1	345
2	310
3	185
4	155
5	305
6	235



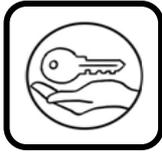
Assessment

Directions: Read and analyze the data below. Then, present double vertical and double horizontal bar graph for each set of data on a separate sheet.

The leader of Group I -Balagtas was tasked by his teacher to get the height and weight of his members. Here is the collected data.

Height and Weight of Members

Name of Pupils	Height	Weight
Rizalina	122cm	55kg
Bonifacio	135cm	62kg
Lucia	142cm	59kg
Amad	125cm	50kg
Sharifa	185cm	67kg



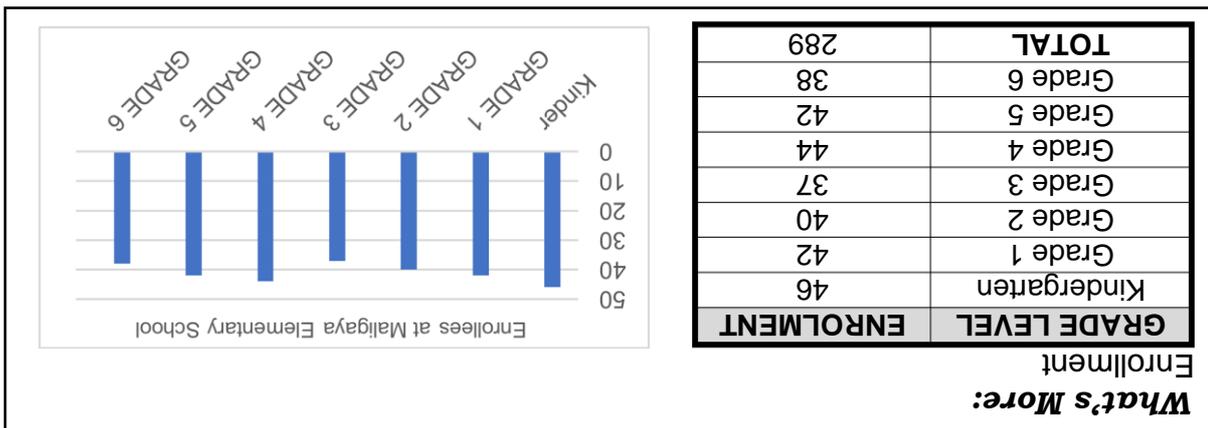
Answer Key

What I Know
1. d 2. a 3. a 4. c 5. d

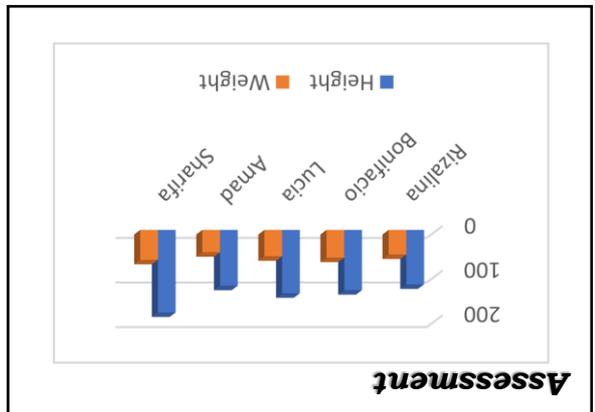
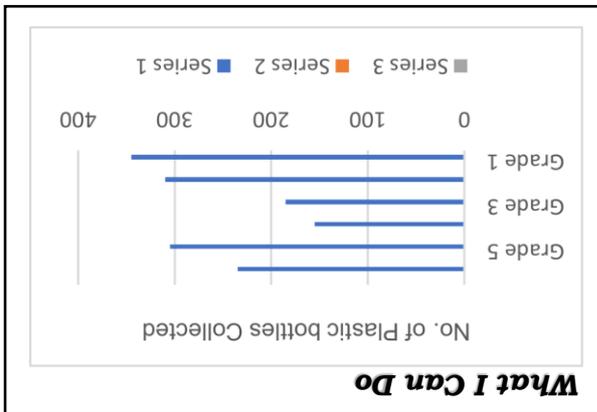
What's In
1. a 2. c 3. a 4. d 5. c

What's New
1. Favorite Colors
2. Girls:Red, Boys:Blue
3. Boys:Violet, Girls:Indigo
4. Blue and Red
5. Boys: Yellow Girls: Violet

What is It
1. Favorite Pets of Grade Four Pupils
2. Dog 3. 7
4. Fish
5. Answers vary



What I Have Learned
1. Data
2. Graph
3. Bar Graph
4/5. Vertical or Horizontal



References:

Ofelia G. Chingcuangco, M.A.Ed. Federico C. Castillo, Ed.D. Mathematics 4 Soaring High with Mathematics Textbook, Pasig City, SAINT MATTHEW'S PUBLISHING, Philippines Copyright, 2019, 280-282.

I AM A FILIPINO

by Carlos P. Romulo

I am a Filipino – inheritor of a glorious past, hostage to the uncertain future. As such, I must prove equal to a two-fold task – the task of meeting my responsibility to the past, and the task of performing my obligation to the future.

I am sprung from a hardy race – child many generations removed of ancient Malayan pioneers. Across the centuries, the memory comes rushing back to me: of brown-skinned men putting out to sea in ships that were as frail as their hearts were stout. Over the sea I see them come, borne upon the billowing wave and the whistling wind, carried upon the mighty swell of hope – hope in the free abundance of the new land that was to be their home and their children's forever.

This is the land they sought and found. Every inch of shore that their eyes first set upon, every hill and mountain that beckoned to them with a green and purple invitation, every mile of rolling plain that their view encompassed, every river and lake that promised a plentiful living and the fruitfulness of commerce, is a hollowed spot to me.

By the strength of their hearts and hands, by every right of law, human and divine, this land and all the appurtenances thereof – the black and fertile soil, the seas and lakes and rivers teeming with fish, the forests with their inexhaustible wealth in wild and timber, the mountains with their bowels swollen with minerals – the whole of this rich and happy land has been for centuries without number, the land of my fathers. This land I received in trust from them, and in trust will pass it to my children, and so on until the world is no more.

I am a Filipino. In my blood runs the immortal seed of heroes – seed that flowered down the centuries in deeds of courage and defiance. In my veins yet pulses the same hot blood that sent Lapulapu to battle against the alien foe, that drove Diego Silang and Dagohoy into rebellion against the foreign oppressor.

That seed is immortal. It is the self-same seed that flowered in the heart of Jose Rizal that morning in Bagumbayan when a volley of shots put an end to all that was mortal of him and made his spirit deathless forever; the same that flowered in the hearts of Bonifacio in Balintawak, of Gregorio del Pilar at Tirad Pass, of Antonio Luna at Calumpit, that bloomed in flowers of frustration in the sad heart of Emilio Aguinaldo at Palanan, and yet burst forth royally again in the proud heart of Manuel L. Quezon when he stood at last on the threshold of ancient Malacanang Palace, in the symbolic act of possession and racial vindication. The seed I bear within me is an immortal seed.

It is the mark of my manhood, the symbol of my dignity as a human being. Like the seeds that were once buried in the tomb of Tutankhamen many thousands of years ago, it shall grow and flower and bear fruit again. It is the insigne of my race, and my generation is but a stage in the unending search of my people for freedom and happiness.

I am a Filipino, child of the marriage of the East and the West. The East, with its languor and mysticism, its passivity and endurance, was my mother, and my sire was the West that came thundering across the seas with the Cross and Sword and the Machine. I am of the East, an eager participant in its struggles for liberation from the imperialist yoke. But I know also that the East must awake from its centuried sleep, shake off the lethargy that has bound its limbs, and start moving where destiny awaits.

For I, too, am of the West, and the vigorous peoples of the West have destroyed forever the peace and quiet that once were ours. I can no longer live, a being apart from those whose world now trembles to the roar of bomb and cannon shot. For no man and no nation is an island, but a part of the main, and there is no longer any East and West – only individuals and nations making those momentous choices that are the hinges upon which history revolves. At the vanguard of progress in this part of the world I stand – a forlorn figure in the eyes of some, but not one defeated and lost. For through the thick, interlacing branches of habit and custom above me I have seen the light of the sun, and I know that it is good. I have seen the light of justice and equality and freedom, my heart has been lifted by the vision of democracy, and I shall not rest until my land and my people shall have been blessed by these, beyond the power of any man or nation to subvert or destroy.

I am a Filipino, and this is my inheritance. What pledge shall I give that I may prove worthy of my inheritance? I shall give the pledge that has come ringing down the corridors of the centuries, and it shall be compounded of the joyous cries of my Malayan forebears when first they saw the contours of this land loom before their eyes, of the battle cries that have resounded in every field of combat from Mactan to Tirad Pass, of the voices of my people when they sing:

“I am a Filipino born to freedom, and I shall not rest until freedom shall have been added unto my inheritance—for myself and my children and my children's children—forever.”