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DepED
DEPARTMENT OF EDUCATION

Lesson Exemplar for Mathematics

Quarter 2
Lesson
2

Lesson Exemplar for Mathematics Grade 4
Quarter 2: Lesson 2 (Week 2)
SY 2024-2025

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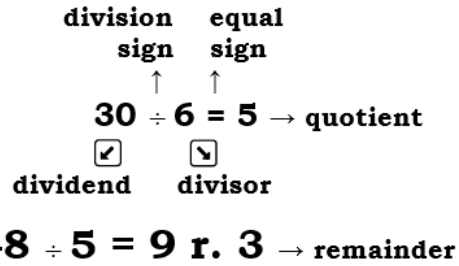
MATHEMATICS / QUARTER 2 / GRADE 4

I. CURRICULUM CONTENT, STANDARDS, AND LESSON COMPETENCIES	
A. Content Standards	The learners should have knowledge and understanding of… • Multiplication of whole numbers with products up to 1 000 000, division of up to 4-digit numbers by up to 2-digit numbers, and the MDAS rules.
B. Performance Standards	By the end of the quarter, the learners are able to… • perform multiplication of whole numbers with products up to 1 000 000. • perform division of up to 4-digit numbers by up to 2-digit numbers. • perform different operations by applying the MDAS rules.
C. Learning Competencies and Objectives	1. Solve multi-step problems involving one or more of the four operations with results of calculations up to 1,000,000, including problems involving money. 2. Divide two numbers with and without regrouping 3- to 4-digit numbers by 1-digit numbers
D. Content	A. Problem Solving on Multiplication B. Dividing Whole Numbers
E. Integration	Principles of Values Education/Christian Living Education, Concepts in Socio-Economic, Science, and Music

II. LEARNING RESOURCES
iStockphoto LP. (2023). Money Saving stock illustration [Image]. iStock. https://encryptedtbn0.gstatic.com/images?q=tbn:ANd9GcQWfIM45SlDszRBuFKXEULd96b-mtKsInRrRoc769Y61Q&s Math Songs by NUMBEROCK. (2015, September 17). Long Division Song | 1-DIgit Divisors | 3rd Grade & 4th Grade [Video]. YouTube. https://www.youtube.com/watch?v=VvQelzRQe7k TheAnimatedClassroom. (2011, March 2). The Steps to Long Division [Video]. YouTube. https://www.youtube.com/watch?v=0uZiqk_ZdcA Other Learning Resources needed for this lesson: Multiplication Flash Cards, Division Flash Cards, and Manipulatives (place value discs)

III. TEACHING AND LEARNING PROCEDURE		NOTES TO TEACHERS
A. Activating Prior Knowledge	**DAY 1** **1. Short Review** • On Multiplication – use multiplication flash cards to review Multiplication facts. • On Division – use division flash cards to review Division facts. What do you call a natural calamity brought by strong winds with heavy rains that may cause flood, landslide, and destruction of structures? Write on the line the letter corresponding to the quotient to decode the word. 1) 25 ÷ 5 = ____ N 2) 9 ÷ 3 = ____ T 3) 20 ÷ 2 = ____ O 4) 16 ÷ 4 = ____ H 5) 7 ÷ 1 = ____ Y 6) 18 ÷ 9 = ____ P 7) 4 ÷ 4 = ____ O __ __ __ __ __ __ __ 3 7 2 4 10 1 5 Have you ever experienced this kind of calamity? **2. Feedback (Optional)**	Review for Day 1 and Day 2 Review for Day 3 to 5, the teacher will elaborate on the students' answers. The teacher will elaborate on the students' answers.
B. Establishing Lesson Purpose	**1. Lesson Purpose** Problem Opener: Sarah saves a portion of her daily allowance. She saves 15 pesos every day for Christmas. 1) How much will she save in 40 days? 2) How will you get the total savings? 3) From the responses, which will give you the answer easily? Why? Today we will be solving word problems on multiplication. **2. Unlocking Content Vocabulary** A. Let us recall the steps in problem solving: **U P A C or Think – Plan – Solve – Look Back** 1. **U**nderstand the problem (Think). Identify what are the given and what is asked.	Possible answers: a) Repeated addition b) Skip counting c) Multiplication For Day 1 and 2 The teacher may use other ways to present the steps in problem solving. Example:

	2. Devise a **P**lan (Plan). Choose an appropriate strategy in solving the problem. 3. **A**nswer or Carry out the plan (Solve). After identifying a strategy to use, solve, and answer the problem 4. **C**heck (Look Back). Have time to reflect and look back on what you have done. What worked and what did not work? What words imply multiplication? *(possible answers: "total; double/ triple; altogether; in all")* B. Recall the parts of a division sentence.  	**GAPESA** G – given A – asked P – process E – equation S – solve A – answer For Day 3 to 5 The teacher will explain each word. Provide other examples if there is difficulty identifying the parts.
C. Developing and Deepening Understanding	**DAY 1** **SUB-TOPIC 1: Problem Solving on Multiplication** **1. Explicitation** Let us solve the following multiplication story. After a typhoon, 1 200 people were brought to an evacuation center. The local government provided 3 meals a day for each evacuee for 12 days. How any meals did the local government provided in all? Solution: **Step 1: (Think).** **What are given in the problem?** a. How many evacuees were there? b. How many meals a day per person did the government prepare? c. For how many days? **What is asked in the problem?** **Step 2: (Plan).** a. How will you solve the problem? b. What operations will you carry out?	For Day 1 and 2 The teacher may ask more questions or rephrase the questions. **Answer to the questions:** a. 1 200 b. 3 meals per day c. 12 days

	c. What strategy will you use? d. Is there a hidden question? If yes, what is the hidden question? e. What is the number sentence? **Step 3: (Solve).** Carry out the operation(s). **Step 4: (Look Back).** Check your answer if it is correct. Have time to reflect and look back on what you have done. What worked and what did not work? **2. Worked Example** Let us solve another problem. Example: Adelle bought 4 sets of uniforms. She paid 640 pesos for each set. She gave 3 000 pesos to the cashier. How much change did she get? **Step 1: (Think).** Given: 4 sets of uniform; 640 pesos each set; 3 000 pesos payment Asked: How much change did she get? **Step 2: (Plan).** Hidden Question: What is the total cost of the uniforms? Number sentence: 3 000 – (640 × 4) = n **Step 3: (Solve).** 640 × 4 = 2 560 3 000 – 2 560 = 440 Answer: She got a change of 440 pesos. **Step 4: (Look Back).** Review your answer. Is it correct? **3. Lesson Activity** Solve on you own. Follow the steps in problem solving. 1. How many legs are there in 6 cows and 4 chickens? 2. In a cheer dance competition, the required number of cheer dancers is 25 and the required number of spotters is 8. There were 12 participating teams. Altogether, how many participants joined the competition? 3. A florist buys 20 bundles of roses to be used for wedding decorations. Each bundle has 48 red and white roses. In each bundle there are 30 red roses and the rest are white. How many white roses are there in all? 4. A two-day musical event sold 1 000 tickets on the first day and 935 on the second day. If each ticket costs 700 pesos, how much does the musical event earn from the ticket sales?	Number sentence: (1 200 × 3) × 12 = n (number of meals) Answer Worksheet No. 1

DAY 2

SUB-TOPIC 2: Dividing 3 to 4-Digit by 1-Digit Numbers Without Regrouping

1. Explicitation

Divide using pictorial representation (place value discs)

a. 426 ÷ 2

On a place value chart form 426 using discs.

Hundreds	Tens	Ones
100 100 100 100	10 10	1 1 1 1 1 1

Group the discs under each place values by 2s as shown below.

Hundreds	Tens	Ones
100 100 100 100	10 10	1 1 1 1 1 1
2	1	3
426 ÷ 2 = 213		

b. 6 905 ÷ 3

Thousands	Hundreds	Tens	Ones
10 000 10 000 10 000 10 000 10 000 10 000	100 100 100 100 100 100 100 100 100		1 1 1 1 1
6	9	0	5

Group the discs under each place value by 3s.

Thousands	Hundreds	Tens	Ones
10 000 10 000 10 000 10 000 10 000 10 000	100 100 100 100 100 100 100 100 100		1 1 1 1 1
2	3	0	1
6,905 ÷ 3 = 2,301 r. 2			

Under the one's column, there 1 group of 3 and a remainder of 2.

For Day 3 to 5
The teacher may use base 10 blocks instead of place value discs. You may use PowerPoint presentation in implementing this activity or make improvised materials.

Ask the learners to count how many groups there are under each place values.

Tell the students that 213 is the answer to the problem 426 ÷ 2.

Group the discs under each place values by 3s. Then, count how many groups there are under each place value.

2. Worked Example

Divide using Long Division

Recall: **DMBS (Divide – Multiply – Subtract – Bring Down)**

In long division, we write the dividend inside the division house and the divisor outside the division house. To easily remember the division process, we think of the members of the family who lives in the house.

Representation: **DMSB (Dad – Mom – Sis – Bro)**

1) 426 ÷ 2

```
  2
2|426
−4
 0
```
Divide 4 hundreds by 2.
2 x 2 hundreds = 4 hundreds
Subtract.

```
  21
2|426
−4
 02
 − 2
  0
```
Bring down 2 tens. Divide 2 tens by 2.
2 x 1 ten = 2 tens
Subtract.

```
  213
2|426
−4
 02
 − 2
  06
  − 6
   0
```
Bring down 6 ones. Divide 6 ones by 3.
2 x 3 ones = 6 ones
Subtract.

2) 6 905 ÷ 3

```
   2
3|6905
 − 6
   0
```
Divide 6 thousands by 3.
3 x 2 thousands = 6 thousands
Subtract.

```
   23
3|6905
 −6
  09
 − 9
  0
```
Bring down 9 hundreds. Divide 9 hundreds by 3.
3 x 3 hundreds = 9 hundreds
Subtract.

```
   230
3|6905
 −6
  09
 − 9
  00
 −0
  0
```
Bring down 0 tens. Divide 0 tens by 3.
3 x 0 tens = 0 tens
Subtract.

```
   2301
3|6905
 −6
  09
 − 9
  00
 −0
  05
  − 3
   2
```
Bring down 5 ones. Divide 5 ones by 3.
3 x 1 one = 3 ones
Subtract.

3. Lesson Activity

Find the quotient of the following numbers using the corresponding methods.

1) 664 ÷ 6 (pictorial)
2) 8 480 ÷ 4 (long division)
3) 704 ÷ 7 (long division)
4) 8 624 ÷ 2 (long division)

The teacher may ask the pupils to think of their own representation of the division process (DMSB)

The teacher will discuss the division process step by step.

DAY 3

SUB-TOPIC 3: Dividing 1-Digit by 1-Digit Number With Regrouping

1. Explicitation

Divide using pictorial representation

a. 235 ÷ 5

Hundreds	Tens	Ones
100 100	10 10 10	1 1 1 1 1

Group the discs under each place value by 5s.

2 hundreds are not enough to make a group of 5, so we need to regroup.

Hundreds	Tens	Ones
100 100 Regroup	10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 Regroup	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	4	7
235 ÷ 5 = 47		

Regroup 2 hundreds.
2 hundred = 20 tens

Group the tens by 5s.
There are **4** groups.

Regroup the extra 3 tens.
3 tens -= 30 ones

Group the ones by 5s.
There are **7** groups.

2. Worked Example

Divide using Long Division

Recall: **DMBS (Divide – Multiply – Subtract – Bring Down)**

In long division, we write the dividend inside the division house and the divisor outside the division house. To easily remember the division process, we think of the members of the family who lives in the house.

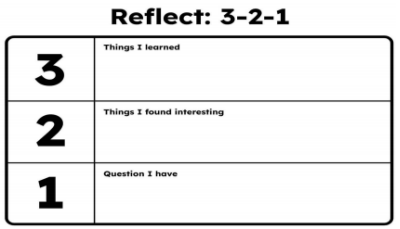
Representation: **DMSB (Dad – Mom – Sis – Bro)**

The teacher will discuss the division process step by step.

Note:
2 hundred 3 tens = 23 tens

Note:
3 thousands 2 hundred
= 32 hundreds

	1) 234 ÷ 5 4 5|234 Divide 23 tens by 5. −20 5 x 4 tens = 20 tens 3 Subtract. 46 5|234 −20 34 Bring down 4 ones. Divide 34 ones by 5. −30 5 x 6 ones = 30 ones 4 Subtract. 2) 3 206 ÷ 7 4 7|3206 Divide 32 hundreds by 7. −28 7 x 4 hundreds = 28 hundreds 4 Subtract. 45 7|3206 −28 40 Bring down 0 tens. Divide 40 tens by 7. −35 7 x 5 tens = 35 tens 5 Subtract. 458 7|3206 −28 40 −35 56 Bring down 6 ones. Divide 56 ones by 7. −56 7 x 8 ones = 56 ones 0 Subtract. **3. Lesson Activity** A. The long division exercise below shows different types of errors. Find the errors and explain each type of errors. B. Find the quotient of the following numbers using the suggested method. Use the back page if needed for your solutions. 1) 984 ÷ 7 (pictorial) 2) 2 118 ÷ 4 (long division) 3) 580 ÷ 9 (long division) 4) 8 319 ÷ 6 (long division)	Watch the video on long division without remainder: https://www.youtube.com/watch?v=0uZiqk_ZdcA Watch the video on long division with remainder: https://www.youtube.com/watch?v=VvQelzRQe7k Answer Worksheet No. 3
C. **Making Generalizations**	**DAY 4** **1. Learners' Takeaways** • Which strategy do you find easy to perform? • In what situations can you use division? • What values did you learn from the lesson?	Provide time for the students to write or discuss their answers to the following questions.

	2. Reflection on Learning Perform the task as presented in the illustration. 	

IV. EVALUATING LEARNING: FORMATIVE ASSESSMENT AND TEACHER'S REFLECTION				**NOTES TO TEACHERS**
A. Evaluating Learning	**DAY 5** **1. Formative Assessment** A. Solve the problem below (on Multiplication): Chad buys a table at 20 000 pesos and sells it for 22 500 pesos. If he sells 15 computers, how much profit does he make? B. Find the quotient by division without regrouping: 1) 632 ÷ 3 2) 4 082 ÷ 2 C. Find the quotient by division with regrouping: 1) 5 824 ÷ 8 2) 467 ÷ 5 **2. Homework (Optional)**			Teachers may encourage learners to have a quiz notebook to monitor learners' academic progress. The quiz notebook may also serve as homework notebook.
B. Teacher's Remarks	*Note observations on any of the following areas:*	**Effective Practices**	**Problems Encountered**	The teacher may take note of some observations related to the effective practices and problems encountered after utilizing the different strategies, materials used, learner engagement, and other related stuff. Teachers may also suggest ways to improve the different activities explored/lesson exemplar.
	strategies explored			
	materials used			
	learner engagement/ interaction			
	others			

C. Teacher's Reflection	*Reflection guide or prompt can be on:* • *principles behind the teaching* *What principles and beliefs informed my lesson?* *Why did I teach the lesson the way I did?* • *students* *What roles did my students play in my lesson?* *What did my students learn? How did they learn?* • *ways forward* *What could I have done differently?* *What can I explore in the next lesson?*	Teacher's reflection in every lesson conducted/facilitated is essential and necessary to improve practice. You may also consider this as an input for the LAC/Collab sessions.