Republic of the Philippines

**Department of Education**

Region V (Bicol)

DIVISION OF CATANDUANES

Virac, Catanduanes

Lesson Plan in Mathematics

 **MATHEMATICS 5**

 **Lesson 8: Creating Problems (with reasonable answers) Involving Factors,**

**Multiples and Divisibility Rules (M5NS- Ic-60)**

**Week 3**

**Objective**: Creates problems (with reasonable answers) involving factors, multiples

 And divisibility rules.

**Value Focus**: Creativity and Love for reading

**Prerequisite Concepts and Skills:**

* Mastery of the multiplication basic facts
* Knowledge on finding the factors, multiples of the given numbers

and the divisibility rules

**Materials**: flash cards, chart

**References:** K to 12 Grade 5 Curriculum, 21st Century Math 5

**Instructional Procedure**:

1. **Preliminary Activities**
2. **Review**

Have the pupils solve the following problems.

1. What is the smallest 3-digit number divisible by 3? \_(102)\_\_\_\_\_\_\_\_
2. At least how much do we need to add to 243 to make it divisible by

10? ( 7 )

1. Three pieces of timber have lengths 63 cm, 84 cm, and 105 cm. A sawmill

operator needs to cut the timber into logs of equal length. What are the

 possible lengths of the logs? (3, 7)

1. A number is divisible by 4, 9, and 12. Find its smallest possible value?( 36 )
2. **Motivation**

 Show a picture of a library. Ask the learners the following questions:

* *What can you see in the picture?*
* *Do we have library in our school?*
* *What are found in the library?*
* *What do you do in the library?*
* *What benefit can you get from reading? Explain*.
1. **Developmental Activities**
2. **Presentation**

Present these problems to the class. Ask the pupils to give some questions

 about the problem.

|  |
| --- |
| A librarian has new books to be placed in shelves. There were 18 Science books, 24 Math books, and 36 English books. If she wants to have the same number of books in each shelf, What are the possible number of books she could place in each shelf?  |

|  |
| --- |
| Kim reads her favorite book in the library every 6 days while Susan reads her book every 8 days. If they start reading on a Monday, when will they read together again? |

Discuss with the class the problem.

Ask: *How will you solve the first problem? The second problem?*

 *Emphasize that the first problem involves finding the factors or*

 *numbers that can divide equally the numbers, while the second*

 *problem involves finding the common multiple of the given numbers.*

 *Can you create problems similar to this problem?*

1. **Performing the Activities**

Group the pupils into 4 teams. Ask the groups to create a problems similar to the ones given. Give them enough time to perform the task.

1. **Processing the activities**

Let the groups present and discuss the problem they have created

**Ask**: *How did you create a problem similar to the ones given?*

*Expected answers:*

* *We familiarize ourselves with the concept and its application to*

 *real-life situation.*

* *We thought of the type of problems we wanted to create.*
* *We read some problems similar to the ones given and studied their*

 *Solutions.*

1. **Reinforcing the Concepts and Skills**
2. Have the pupils create a problem similar to the one below.
3. Bea can run around the park in about 12 minutes and her friends, Hillary, can do it in 16 minutes and Joseph can do it in 20 minutes. If they continue running around the park, how long will it take them to be next to each other again?
4. Mr. Cruz needs to divide a land which measures24 m by 60 m into equal squares. The sides of the square should be a whole number. What are the dimensions of the squares? What is the largest size

of the square?

1. Ask the pupils to answer the following exercises.

Write a question to complete each item. Solve each problem.

1. Eunice and Anne love to collect Philippines stamps. Eunice has

60 stamps while Anne has 100 stamps. They plan to keep their

stamps in an album.

1. Three cyclists, Ron, Red, and Lance start at the same spot. Ron

can complete a whole round in 50 minutes,Red in 45 minutes

and Lance in 36 minutes. If they all start at 3 o’clock in the

afternoon,

1. **Give more exercises.**
2. Write a problem for the numbers and phrases.
3. 24 chocolate cupcakes

32 ube cupcakes

60 mocha cupcakes

Arrange in a box

Biggest number

1. 60 Math books

72 Science books

90 Filipino books

Distributed equally to three classes

Books received

b. Create some word problems involving factors and multiples.

1. **Summarizing the Lesson**

Summarize the lesson by asking*: How do we create problems involving*

*factors, multiples and divisibility rules with reasonable answers?*

|  |
| --- |
| * Familiarize oneself with the concept, and its application in

 real-life situations.* Think of the type of problem you want to create.
* Read some problems and study their solutions.
 |

1. Have the pupils do the exercises.

Create some word problems involving factors and multiples.

**C. Assessment**

 **a**. Create a problem involving factors, multiples and divisibility rules for each set of

information given below.

|  |
| --- |
| 1. 30 bananas, 60 chicos, and 120pears

put in a small traynumber of tray |

|  |
| --- |
| 1. Girl Scouts

Arranging themselves in different formationsLine up by 4, 6, and 8Least number of Girl Scouts present |

1. Create your own word problem involving multiple, factors and divisibility rule with reasonable answer.

**D. Home Activity**

 Create 2 problems involving factors and multiples.

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