Lesson 1: Visualizing Numbers up to 5000

Week 1

Objective
Visualize numbers 1001 up to 5000

Value Focus
Accuracy, Perseverance

Prerequisite Concepts and Skills
1. Visualizing, reading, and writing numbers through 1000
2. Intuitive concept of numbers
3. Place value of whole numbers

Materials
Flats, longs and squares, flash cards, grid papers/hundreds chart

Instructional Procedures

A. Preliminary Activities

1. Drill
   Have pupils in the first row write a number between 101 and 1000 on their "show-me board."
   Call each one to show the number to the class to read. Do this as snappily as possible. Repeat the same procedure with the other rows.

2. Review
   Give pupils exercises on writing numbers in words and in symbols.
   Write the following in symbols, e.g.
   1) eight hundred forty-eight
   2) nine hundred ninety-nine
   3) one hundred four
   Write the following in words, e.g.
   345 503 674 980 864

3. Motivation
   Play a puzzle game. Provide each group of pupils with sets of numerals 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. The puzzle is a number (ranging from 101 to 1000) written in bold figures. Ask pupils to answer the questions that you will read.
   Examples: What is the smallest 3-digit number that can be formed?
             How will you write two hundred eighty-five in symbols?
             The first group to form the puzzle wins the game.
B. Developmental Activities

1. Presenting the Lesson
   Post the puzzles formed on the board.
   Ask:  How are these numbers similar?
   How many digits are there?
   What is the biggest place value in the numerals?

2. Performing the Activity
   Have the pupils use flats, longs, and squares to illustrate/visualize each number.
   - 1 square = one (1)
   - 10 squares = 1 long (1 ten)
   - 10 longs (10 tens) = 1 flat (1 hundred)
   - 10 flats (10 hundreds) = 1 block (1 thousand)

Say: Suppose you count on from 1 000, what would be the next number?

Introduce the number 1 000.

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Using blocks, flats, longs and squares, 1 000 has how many loose squares? How many longs? flats? blocks?
How many is 1 000 in hundreds? tens? ones?
1 000 = 10 hundreds
   = 100 tens
   = 1 000 ones
If we count from one to one thousand and add 1, we have one thousand one.
Guide the pupils to visualize other numbers using flats, longs and squares, e.g.

a. 2 425

2 blocks            4 flats   2 longs            5 squares
2 000               +                    400        +         20          +           5

b. 3 627

3 blocks                          6 flats                2 longs             7 squares
3 000                         +              600        +          20          +           7

3. **Processing the Activity**
Ask:
What do the blocks represent? the flats? the longs? the squares?
When we add one square to 1 000 blocks, how much do we get?
In the representation, how much is 2 blocks, 4 flats, 2 longs, and 5 squares?
How many blocks, flats, longs, and squares is 3 627?
Can you now visualize big numbers using this representation?

4. **Reinforcing the Concept**
Divide the pupils into 10 groups. Give each group a chart with the title "My 2 001 – 2 100 Chart". Have them complete the chart:
2 001 – 2 100, 2 101 – 2 200, and so on.
For additional exercises, let pupils answer Activities 1 and 2 in the LM.

5. **Summarizing the Lesson**
   How could we visualize numbers from 1 001 – 5 000?
   What helps us visualize the numbers?

   In visualizing numbers 1 001 up to 5 000, blocks (thousands), flats (hundreds), longs (tens) and squares (ones) are used.

6. **Applying to New and Other Situations**
   Have pupils work on Activity 3 in the LM.
   **Answer Key:**
   1) 1 375
   2) 2 083
C. Evaluation
Have pupils do the exercises under Activity 4 in the LM.
Answer Key:
A. 1) 2 217
   2) 3 248
   3) 3 260
   4) 1 518
   5) 4 231
D. Home Activity
Give Activity 5 in the LM as assignment. Check pupils’ work.
Answer Key:
1) 1 802
2) 2 574
3) 4 090
Lesson 2  Visualizing Numbers up to 10 000

Week 1

Objective
Visualize numbers 5 001 up to 10 000

Value Focus
Accuracy, Patience

Prerequisite Concepts and Skills
1. Visualizing, reading, and writing numbers through 5 000
2. Intuitive concept of numbers
3. Place value of whole numbers

Materials
Flats, longs and squares, flash cards, grid papers/hundreds chart

Instructional Procedures

A. Preliminary Activities
   1. Drill
      Have pupils in the first row write a number between 5 001 and 6 000 on their “show me” board.
      Call each one to show the number to the class and read. Do this as snappily as possible. Repeat the same procedure with the other rows.

   2. Review
      Let the pupils answer the exercise below:
      Write the number represented by each set of number discs.

      1) 1 000 1 000 1 000 1 000 1 000 100 10 1

      2) 1 000 1 000 1 000 1 000 1 000 1 000 1 000
      100 10 10 1 1

   3. Motivation
      Divide the class into four groups.
A number will be assigned and pinned to each group member - 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. They will be asked some questions and they will arrange themselves according to their answer. The members without numbers assigned to them will serve as group facilitators and one will write the group answer on the board.

The group with the highest score wins the “Give Me” game. Say: Give me:

1. The smallest 4-digit number that you can form. (1 234)
2. The biggest 4-digit number that you can form. (9 876)
3. A 4-digit number with 5 in the hundreds place

After checking the scores, announce the winner.

This time, merge the groups and come up with two groups each with 2 sets of (0, 1, 2, 3, 4, 5, 6, 7, 8, 9).

Say: Give me:

1. The smallest 4-digit number. (1 001)
2. The biggest 4-digit number. (9 988)

B. Developmental Activities

1. Presenting the Lesson

Post all the numbers formed: 1 234, 9 876, 2 468, 1 001, 9 988

Ask: Which of these numbers has the smallest digit in the thousands place? (1 001)
Which has the biggest digit in the thousands place? (9 876 and 9988)
Which number has the biggest value? (9 988)

What is the highest place value of this numeral? (thousands)
What is the highest place value if 9 988 is rounded off to 10 000? (ten thousands)
2. Performing the Activity

Have the pupils use flats, longs, and squares to illustrate/visualize 9 000 and 10 000.

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 block = 10 flats or 100 longs or 1 000 squares = 1 000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 flat = 10 longs or 100 squares = 100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 long = 10 squares = 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 square = 1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Let them use blocks, flats, longs, and squares to visualize 9 988.
Represent 9 000 using blocks, 900 using flats, 80 using longs and 8 using squares.

Ask: How many blocks are there? ____ (9)
How many flats? ____ (9) longs? ____ (8) squares? ____ (8)

Say: If we have 9 blocks or 9 000 and we add 1 more block or 1 000, how many blocks do we have now? (10)
10 blocks is equal to what number? (10 000)

Since the number (10 000) is so large, aside from using blocks, flats, longs and squares, we can also represent it with a picture of a bundle of straws with 10 000 label, e.g.

Guide the pupils to see the relationship between the bundled straws and the flats, longs, and ones, such that:

<table>
<thead>
<tr>
<th>Ten Thousands</th>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>bundle of 10 000 straws</td>
<td>bundle of 1 000 straws</td>
<td>bundle of 100 straws</td>
<td>bundle of 10 straws</td>
<td>one straw</td>
</tr>
<tr>
<td>= 10 blocks</td>
<td>= 1 block</td>
<td>= 1 flat</td>
<td>= 1 long</td>
<td>one square</td>
</tr>
<tr>
<td>= 10 000</td>
<td>= 1 000</td>
<td>= 100</td>
<td>= 10</td>
<td></td>
</tr>
</tbody>
</table>

Note: Real bundled straws can also be used to visualize large numbers.

Post bundled straws on the board. Ask the pupils to give the number, e.g.
Provide bundled straws to pupils in 1,000s, 100s, 10s and 1s. Let the pupils show the following numbers using the bundled straws.
e.g. 8 207  6 482  9 025
Provide or let the pupils bring out their pre-assigned blocks, flats, longs and squares. Have the pupils answer Activity 1 in the LM.

3. **Processing the Activity**
   Ask the following questions:
   How did you find the activity?
   Did you find it helpful to use flats, longs and squares and the bundled straws in visualizing numbers?

4. **Reinforcing the Concept**
   Provide pupils with bundled straws. Have pupils work on Activity 2 in the LM.

5. **Summarizing the lesson**
   Ask pupils the following questions:
   How do we visualize numbers 5,001 to 10,000?
   What could help us visualize numbers?

   To help visualize numbers from 5,001–10,000, blocks (thousands), flats (hundreds), longs (tens) and squares (ones) are used. Bundled straws (real or pictures) are also helpful in visualizing large numbers.

6. **Applying to New and Other Situations**
   Have pupils work on the exercises under Activity 3 in the LM.
   Answer Key: 1) 6 431  2) 7 512  3) 5 754  4) 7 202

C. **Evaluation**
   Give Activity 4 in the LM for pupils to answer. Check their work.

D. **Home Activity**
   Have pupils work on Activity 5 at home.

   Answer Key:
   1) 5 208
Lesson 3  Giving the Place Value and Value of Numbers up to 10,000

Week 1

Objective
Give the place value and value of a digit in a number up to 10,000

**Value Focus**
Accuracy, Truthfulness

**Prerequisite Concepts and Skills**
1. Reading and writing numbers from 1 up to 10,000 in symbols and in words
2. Identifying the place value and the value of a digit in 3- to 4-digit numbers
3. Renaming numbers in expanded form

**Materials**
Flash cards, counters, place value chart, grid papers

**Instructional Procedures**

**A. Preliminary Activities**

1. **Drill**
   Have pupils work on Activity 1-A in the LM.

2. **Review**
   Give Activity 1-B in the LM as a review.

3. **Motivation**
   Form four groups of three pupils each. Give each group two sets of number cards (numbers 0 through 9). Give these directions:

   a. Each member of the group takes a number. As a number is called, group members line to form that number. 
   Example: 654  
   982
   b. The first group to form the number correctly wins.

**B. Developmental Activities**

1. **Presenting the Lesson**
   Provide and present the counters – flats, longs, and squares or let the pupils bring out their pre-assigned counters. Have the pupils count them. Let them group them into thousands, hundreds, tens and ones. Ask: How many thousands did you form? How many hundreds are there? tens? ones? 
   Have the pupils write the numbers on the board. 
   Have them write the number in expanded form. 
   Present this place value chart and refer pupils to the LM. Discuss the different place values.
Let pupils do Activity 2. Let them give the number represented by the number discs on the chart. Let them answer the questions that follow.

<table>
<thead>
<tr>
<th>Ten thousands</th>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
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Ask: How many digits are there?
What is the place value of 5? 3? 7? 2?
Let pupils see the value of each digit by having them write the number in expanded form.

Let them note that the value of a number could be arrived at by multiplying the digit by its place value as shown in the procedure below.

<table>
<thead>
<tr>
<th>Digit</th>
<th>Place Value</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>x 1</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>x 10</td>
<td>70</td>
</tr>
<tr>
<td>3</td>
<td>x 100</td>
<td>300</td>
</tr>
<tr>
<td>5</td>
<td>x 1000</td>
<td>5000</td>
</tr>
</tbody>
</table>
To give meaning to the value of the number, point out that putting 
together the values of each digit will give the total value of the 
number.

Illustrate this idea by adding all the values of each digit and equating 
them to the number as shown.

\[ 5000 + 300 + 70 + 2 = 5372 \]

Lead pupils to see the pattern that the place value of a digit is always 
10 times as great as the place value of the digit to its right.

Introduce the next higher place value – the ten thousands place.

Present this place value chart.

<table>
<thead>
<tr>
<th>Ten thousands</th>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>2</td>
<td>9</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td></td>
</tr>
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</table>

Use the above procedure in presenting the next higher place value in 
the first number. Then discuss extensively on the place value and value 
of each digit in the number.

Present the next number which is 8888. Have them read it. Ask 
volunteers to give the place value and the value of each digit. 
Write the answers on the board.

2. Performing the Activity
   a. Divide the class into groups. 
      Distribute number cards bearing numbers not greater than 10000.

   
| 6437 | 6549 | 7362 | 1075 | 5248 |

   Have them write the digits in their correct place value using the place 
value chart provided to them.

3. Processing the Activity
   Ask the following questions. 
Which digit in card 1 is in the thousands place? in the ones place?
What is the place value of each digit in card 1?
What is the value of each digit in the number?
Which digit has the greatest value? the least value?
Ask the same questions for the rest of the given numbers.
4. Reinforcing the Concept
Have pupils work by pairs on Activity 3 in the LM. Discuss their answers afterwards.
Answer Key: A. 1) thousands, 1000  2) hundreds, 600  3) tens, 30
  4) hundreds, 400  5) ones, 8
B. 1) 7 thousands + 5 hundreds + 2 tens + 4 ones
  2) 9 thousands + 8 hundreds + 4 tens + 1 ones
  3) 4 thousands + 3 hundreds + 8 tens + 5 ones
  4) 7345 means 7000 + 300 + 40 + 5
  5) 5446 means 5000 + 400 + 40 + 6
C. 1) Thousands, hundreds, tens, and ones
  2) Thousands – Thousands period; hundreds, tens, and ones – Units Period
  3) To find the value of a digit, multiply it by its place value.

5. Summarizing the Lesson
Ask the following questions:
What are the place values in a 4-digit number?
In which group of number or period name is each place value found?
How do you find the value of a digit in a given number?

6. Applying to New and Other Situations
Have pupils work on Activity 4 in the LM. Guide pupils in doing the exercises.
Answer Key: A. 1) 5  2) 4  3) 8  4) 6
B. 1) 8342  2) 8931  3) 2830  4) 2899  5) 9845

C. Evaluation
Give Activity 5 in the LM. Check pupils' answers.
Answer Key: A. 1) Thousands; 5000  2) Ones; 50  3) Tens; 50
  4) Thousands; 5000  5) Hundreds; 500
B. 1) 2  2) 8  3) yes, place holder for tens (2508)

D. Home Activity
Have pupils study the illustration in Activity 6 in the LM and let the pupils give five 4-digit numbers using the digits found in the illustration.
Lesson 4  Reading and Writing Numbers up to 10 000

Week 1

Objective
Read and write numbers up to 10 000 in symbols and in words

Value Focus
Accuracy

Prerequisite Concepts and Skills
1.  Reading and writing numbers through 5 000
2.  Intuitive concept of numbers
3.  Place value of whole numbers

Materials
Flats, longs and squares, flash cards, grid papers/place value chart

Instructional Procedures
A. Preliminary Activities

1.  Drill
   Pupils read numbers from 101–1 000. Use flash cards for this purpose.

2.  Review
   Write the missing number in the shapes below.

   a.  
      
      375  377  379

      703  706
3. **Motivation**
   
   Mix and match

Distribute a set of cards with numbers written in symbols and another set of cards with their equivalent numbers in words. Tell the pupils to find their match. The first pair to find a match wins. Post the pairs found on the board.

### B. Developmental Activities

1. **Presenting the Lesson**

   Post the problem on the board.

   Glenda heard from the newscaster that there are one thousand twenty-five voters in barangay Sta. Ana and one thousand three hundred twenty-four voters in barangay Nabalod. She wrote the numbers on her paper this way,

   - Barangay Sta. Ana – 1 250 voters
   - Barangay Nabalod – 1 324 voters

   Is she correct in writing the numbers? Why?
   
   Which number is written correctly? Why?
   
   Which is not? What is the correct way of writing this number?

2. **Performing the Activity**

   Divide the class into groups.

   Assign each group a task. Ask them to prepare the hundreds chart:

   - **Group 1** – Make a number chart from 1 001–1 100.
   - **Group 2** – Make a number chart from 2 401–2 500.
   - **Group 3** – Make a number chart from 3 501–3 600.
   - **Group 4** – Make a number chart from 4 201–4 300.
   - **Group 5** – Make a number chart from 6 801–6 900.
   - **Group 6** – Make a number chart from 8 301–8 400.
   - **Group 7** – Make a number chart from 9 901–10 000.

   Ask: How were you able to do your task?

   Call some pupils to read some numbers they have written, e.g. 1 083, 2 426, 4 238

   Call some pupils to write some numbers in words on the board or on their show me boards, e.g. 3 575, 8 400

3. **Processing the Activity**
Ask the following questions.

- How many digits do numbers from 1 001 to 9 999 have? Which digit belongs to the thousands group?
- How many digits are there in 10 000? Which digit belongs to the thousands group?
- How did you write the numbers in symbols? How did you separate the digits in the thousands place to that in the digits in the hundreds, tens and ones place?
- How do you write the numbers in words? Do you still need to write zero when writing in words? Why?

4. Reinforcing the Concept
Guide pupils in working on Activity 1 in the LM.

Answer Key: A. 1) one thousand, four hundred seventy-five 2) three thousand, four hundred eighty 3) four thousand, five hundred thirty-seven 4) five thousand, four hundred sixty-two 5) nine thousand, four hundred eighty-four

B. 1) 2 703 2) 6 547 3) 9 132 4) 7 034 5) 5 301

5. Summarizing the Lesson
Ask: How do we write numbers from 1 001 to ten thousand in symbols and in words?

To write numbers from 1 001 to 10 000, start reading or writing from the biggest place value down to the lowest, or from left place value to right place value.

6. Applying to New and Other Situations
Guide pupils in doing Activity 2 in the LM.

Answer Key: 1) 6 463 2) 7 587 3) 4 518 4) 5 489 5) 9 537

C. Evaluation
Have pupils work on Activity 3 in the LM.

Answer Key:
A. 1) five thousand, four hundred fifty-nine 2) six thousand, five hundred sixty-eight 3) five thousand, one hundred seventy-three 4) five thousand, three hundred forty-two 5) six thousand, twelve

B. 1) 5 961 2) 7 234 3) 8 044 4) 9 373 5) 6 097

D. Home Activity
Give Activity 4 in the LM as pupils’ assignment. Check their work.

Answer Key:
1) 9 876 – nine thousand, eight hundred seventy-six
2) 5 474 – five thousand, four hundred seventy-four

Lesson 5 Rounding Off Numbers to the Nearest Tens, Hundreds and Thousands

Week 2

Objective
Round off numbers to the nearest tens, hundreds, and thousands

Value Focus
Accuracy

Prerequisite Concepts and Skills
1. Concept of numbers
2. Concept of place value
3. Reading and writing numbers
4. Concept of near and far
5. Comparing sets of objects
6. Concept of left and right
7. Concept of up and down

Materials
Number cards, bottle full of beads, pictures

Instructional Procedures

A. Preliminary Activities
   1. Drill
      Give the directions to the following exercises and call on pupils to answer snappily.

      Give the place value of the underlined number.
      1.  368
      2.  1 482
      3.  745
      4.  1 425
      5.  936
2. Review

Write your answers on your “Show Me” boards.

A. If we skip count by 10s,
   1. 28 is nearer to _____.
   2. 42 is nearer to _____.
   3. 61 is nearer to _____.
   4. 73 is nearer to _____.
   5. 89 is nearer to _____.

B. If we skip count by 100s.
   1. 121 is nearer to _____ than_____.
   2. 389 is nearer to _____ than_____.
   3. 512 is nearer to _____ than_____.
   4. 678 is nearer to _____ than_____.
   5. 803 is nearer to _____ than_____.

3. Motivation

Posing the Problem

a. Show a bottle full of beads. Ask: Can we tell the exact number of beads at a glance? About how many beads do you think are in the bottle?

b. Show a picture of a big crowd of people such as in a basketball game. Ask pupils to describe what they see in the picture. Ask: Can you tell the exact number of people watching the game? About how many people are watching the basketball game?

Say: Sometimes there is no need for us to give the exact number. Instead we just approximate/estimate how many people or things there are.

B. Developmental Activities

1. Presenting the Lesson

You can make an estimate when you need to know about how many or about how much. Rounding off numbers is one way of making estimates.

Example:
Suppose it takes you 22 minutes to get home from school. Would you say it takes you about 20 minutes or about 30 minutes to get there?

Let us use a number line. Label it with numbers from 10 to 30.

Find the point for 22. Is it closer to 20 or 30? (It is closer to 20.)
Since it is closer to the smaller number, we round it down.
So, 22 rounded to the nearest tens is 20.

Find 27. To what number is it closer? 30 or 20? Since it is closer to 30 we round it up. So 27 rounded to the nearest tens is 30.

Find 25. Where is it located? It is halfway between 20 and 30. Round up numbers that have 5 in the ones unit, such as 25. So 25 rounded to the nearest tens is 30.
Identify more points in the number line. Ask in which tens each number is nearer. Write all the answers on the board.

Guide the pupils to see the pattern when to round up and when to round down.

2. Performing the Activity

Guide pupils in doing Activity 1 A- C in the LM as examples.

A. John spent his vacation in Manila for 29 days. Rounded to the nearest tens, about how many days did John spend his vacation in Manila?

Study the number line to find the answer.

In which tens is 29 nearer, 20 or 30? So, what is 29 rounded to the nearest tens? John spent his vacation in Manila for about 30 days.

20, 21, 22, 23, 24, are nearer to 20. When rounded to the nearest tens, their number is 20.
Ask: Did you round up or down?

25, 26, 27, 28, 29 are nearer to 30. When rounded to the nearest tens, their number is 30.
Ask: Did you round up or round down?

B. Study the number line. Read the number labels.

In which hundreds is 260 nearer, 200 or 300? So, 260 rounds to 300.
C. Study the number line. Read the number labels.

In which thousands is 4,300 nearer, 4,000 or 5,000? So 4,300 becomes 4,000 when rounded to the nearest thousands.

Let pupils do Activity 1 D – G with their partners. Discuss their answers afterwards.

Answer Key:
D. 1) 60  2) 80  3) 40  4) 70  5) 90
E. 1) 100  2) 300  3) 600  4) 300  4) 400
F. 1) 2,000  2) 2,000  3) 4,000  4) 5,000
G. 1) to tens – ones  2) to hundreds – tens  3) to thousands - hundreds
  2) 0, 1, 2, 3, or 4  3) 5, 6, 7, 8, or 9

3. Processing the Activity
Call on pupils to answer the following:
- What is the rounding place if a number is to be rounded to tens? hundreds? thousands?
- What digit should be to the right of the digit in the rounding place in order for you to round down?
- What digit should be to the right of the digit in the rounding place in order for you to round up?

4. Reinforcing the Concept
Pupils will play a game “Can You Find Me.” Write the numbers on the number cards and post them on the board. (Cover them first prior to the instructions). Refer to Activity 2 in the LM for the numbers and the questions.

Divide the class into 5 or 6 groups.
Ask the group to look for the answers to the questions from the number cards arranged on the board.

At the signal Go, uncover the cut-outs and let the pupils start. The first group to give the most number of correct answers wins the game.

5. Summarizing the Lesson
Ask: How do we round off numbers?

To round off numbers …
1. Look for the place of the digit to be rounded off.
2. Check the digit to its right. If it is 4 or below, round it down.
3. If it is 5 or above, round it up.
4. Change all the digits to the right of the digit to be rounded off to 0.
6. Applying to New and Other Situations

Have pupils work on Activity 3 of the LM.

Answer Key: A. 1) 60  2) 40  3) 500  4) 600  5) 1 000
B. 1) 70  2) 500  3) 400  4) 6 000  5) 200
C.

<table>
<thead>
<tr>
<th></th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>200</th>
<th>300</th>
<th>400</th>
<th>500</th>
<th>3 000</th>
<th>4 000</th>
<th>5 000</th>
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<tbody>
<tr>
<td></td>
<td>38</td>
<td>49</td>
<td>56</td>
<td>68</td>
<td>243</td>
<td>273</td>
<td>361</td>
<td>485</td>
<td>2 548</td>
<td>4 217</td>
<td>4 613</td>
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<td>42</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

C. Evaluation

Give Activity 4 to pupils to check on their learning.

Answer Key: 1) 3 000  2) 54 kg, 47 kg, 58 kg  3) 330  4) 260 dm and 300 dm because it is greater than 257  5) answer depends on the prevailing prices of the items in the community

D. Home Activity

Pupils answer Activity 5 in the LM.

Answer Key:
A. 1) 849  2) 750  3) 549; 450  4) 9 100  5) 6 000
B. Possible Answers: 1) 70 – 65, 66, 67, 68, 69, 71, 72, 73, 74  2) 400 – 350, 351, 352, ..., 449  3) 8 000 – 7 500, 7 501, 7 502, ..., 8 499
C. 2) 220  3) 207  4) 9 180  5) 840  6) 510  9) 1 206

Lesson 6  Comparing Numbers up to 10 000

Week 2

Objective

Compare numbers up to 10 000 using relation symbols

Value Focus

Accuracy, Honesty

Prerequisite Concepts and Skills

1. Intuitive concepts of numbers up to 10 000
2. Write numbers after, before, between a given number
3. Place value
4. Concept of more than, less than

Materials
Flats, longs, and squares, pictures/illustrations, charts/tables, activity card, number line

Instructional Procedures

A. Preliminary Activities

1. Drill
   Show two sets of pictures or real objects to pupils. Have them count the number of objects in each picture and tell which of the sets has more or less number. Do this fast. Below are examples of pictures or real objects for counting.
   - 25 crayons
   - 30 crayons
   - 32 coins
   - 27 coins
   - 18 umbrellas
   - 24 umbrellas

   Have pupils tell the missing number in each blank.
   - 616 _______ 618 _______ 620 _______ 622
   - 357 _______ 359 _______ 361 _______ 363

2. Motivation
   Lead pupils in playing a game. Have them group themselves according to the following:
   - color of their dress
   - first letter of their names
   - favorite subject

   Ask: What color of dresses has the most number? the least? Compare the numbers.
   What first letter of names has the most number? the least? How would you compare their numbers?
   What subject is the favorite of most pupils? The least? Compare the numbers.

B. Developmental Activities

1. Presenting the Lesson
   Have pupils look at the picture on the LM. Have them read the text about Sally and Carmy.
   Show the chart to pupils and explain the data.

<table>
<thead>
<tr>
<th>Best Friends</th>
<th>Number of rubber bands collected</th>
</tr>
</thead>
</table>

25
Ask: How many rubber bands did Sally collect? What about Carmy? Who collected more rubber bands?
Help pupils to visualize the problem. Use flats, longs, and squares.

Let the pupils compare the two numbers by their digits.
Ask: What can you say about their digits in the thousands place? (They are equal)
in the hundreds place? (They are not the same in number.)

Ask: Which hundred is more? (6 hundred is greater than 2 hundred.)
So, 1637 is greater than 1259.

Introduce the symbols > for “greater than”, < for “less than”, and = for “equal”.
Say: 1637 is greater than 1259. In symbol, it is written as: 1637 > 1259
1259 is less than 1637. In symbol, it is written as: 1259 < 1637
Therefore, Sally collected more rubber bands than Carmy.

Give an example illustrating the concept of equality (=).

Present another way of comparing the numbers by using a number line.
Plot the points on the number line. Ask which of the two numbers should be written on the left side and on the right side. Have pupils explain why.

Tell pupils to read the numbers on the given segment of the number line.
Ask: What is the leftmost number in the given segment of the number line? the rightmost?
Which number is greater? Which is lesser?
What do you notice with the numbers as they go from left to right?
Which is greater between the two numbers as they are seen on the number line? Which is lesser?
How do we use the number line in comparing numbers?

Have pupils study and compare the numbers below:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$5,482$</td>
<td>$9,649$</td>
</tr>
<tr>
<td>$9,583$</td>
<td>$9,385$</td>
</tr>
</tbody>
</table>

$5$ thousand $<$ $9$ thousand  
So, $5,482$ $<$ $9,649$

$9$ thousand $=$ $9$ thousand  
So, $9,583$ $>$ $9,385$

$9,649$ $>$ $5,482$  
$9,385$ $<$ $9,583$

2. **Performing the Activity**
   Let pupils work in pairs. Tell them to make posters that show the meaning of $<$, $>$, and $\leq$. Tell them to use numbers, words, pictures and the symbols.
   Have pupils present their posters to the class. Display the posters so pupils can refer to them as they study the lesson.

3. **Processing the Activity**
   Ask the pupils the following questions:
   - In the activity, what symbols did you use to show the comparison between two numbers?
   - What symbol did you use to show that one number is more than the other?
   - What symbol did you use to show that one number is less than the other?
   - What symbol did you use to show that the number of objects is the same?

4. **Reinforcing the Concept**
   Divide the pupils into 4 groups. Ask the pupils to use the following hand gestures for “less than”, for “greater than” and for “equal”.

27
As the pairs of numbers are called, the groups give their answer by doing the hand gesture that corresponds to their answer. Refer to Activity 1 in the LM for the pairs of numbers.
Answer Key: 1) <  2) <  3) <  4) <  5) <  6) =  7) =  8) <  9) =  10) <

5. **Summarizing the Lesson**
   Ask: How do we compare numbers? What symbols do we use?

   To compare numbers, we use the following symbols:
   > for “greater than”; < for “less than”, and = for “equal to”.

6. **Applying to New and Other Situations**
   Have pupils work on Activity 2 in the LM. Assist pupils in solving the word problems. Provide more exercises if needed.

   Answer Key:
   A. 1) 3 280  2) December
   B. 1) 9 879  2) 8 400  3) 7 643  4) 6 897  5) 7 342

C. **Evaluation**
   Give Activity 3 in the LM for pupils to work on.
   Answer Key:
   A. 1) <  2) <  3) <  4) >  5) =
   B. 1) No because 426 < 624
   2) The digit 4 in 934 has a value of 4 while the 4 in 647 has a value of 40.
   C. 1) tens place  2) hundreds place.

D. **Home Activity**
   Pupils write the correct symbol for each pair of numbers in Activity 4 in the LM.
   Answer Key: 1) <  2) <  3) =  4) >  5) >

---

**Lesson 7  Ordering Numbers up to 10 000**

**Week 2**

**Objective**
Order numbers up to 10,000 in increasing or decreasing order

**Value Focus**
Generosity

**Prerequisite Concepts and Skills**
1. Intuitive concepts of 1001–10,000
2. Writing numbers after, before, and between a given number
3. Comparing numbers up to 10,000 using relation symbols

**Materials**
Flats, longs, and squares; pictures/illustrations; charts/tables; activity cards; number line; counters

**Instructional Procedures**

**A. Preliminary Activities**

1. **Drill**
   a. Using the flash cards, have the pupils give the place value of a digit in the number. (Say the digit as the card is flashed.)
   Example: 7,634 (six) 4,351 (four)

   b. Using another set of flash cards, have the pupils give the number that comes before or after the number that is flashed.
   Example: 4,728 ________ 2,391

2. **Review**
   a. Play a game between pairs.
      1) Provide each pair of pupils a small circle of cardboard with the word “more” on one side and the word “less” on the other side. Also give them a set of number cards with 4- to 5-digit numbers written on them.
      2) Have each pair lay one of their number cards on the table face down.
      3) Have one pupil throw the circle cardboard in the air. As the cardboard lands on the table or the floor, the pupils check and find out which side lands up. If it is “more,” the pair whose number is greater earns a point. If the “less” side lands up, then the pair whose number is less gets the point. (Let the class decide which of the numbers is more or less.)
      4) Have the pupils place another set of number cards on the table, and then repeat the same procedure.
      5) The pair to earn 3 out of 5 points wins the game.

   b. Study each pair of numbers, and then, answer the following questions.
What digit or digits will you write in the blank to make the number greater than the number on the right?

1) 4 __37  4 794
2) __143   1 268
3) 7 8__9   7 861

What digit or digits will you write in the blank to make the number less than the number on the left?

1) 4 763  __ 457
2) 5 994  5__58
3) 6 745  6 74___

3. Motivation
Call on pupil volunteers to stand in front and arrange themselves from tallest to shortest.

Ask: How many pupils are there? What do you notice about their arrangement? How are they arranged? Who can come up front and arrange all your classmates in order from tallest to shortest/shortest to tallest?

B. Developmental Activities

1. Presenting the Lesson
   a. Show a clothesline with two numbers (6 392 and 4 354) pinned on it. Let the pupils read the numbers.

Say: What if there is another number like 5 253? Where should it be placed so that the numbers are arranged from greatest to least? (Answer: between 6 392 and 4 354)
Ask: Why should it be placed in that position? (because 5 253 is less than 6 392, but greater than 4 354 and we are following the decreasing order)

What if there is another number like 2 998? Where should it be placed?
(Answer: after 4 354)
Why? (to arrange the numbers in order from greatest to least)
Remember that you are arranging the numbers from greatest to least.

Remind pupils that when the numbers are arranged in **decreasing order**, the arrangement starts with the greatest number and ends with the least number.

Ask: If the numbers were arranged from least to greatest or in increasing order, how will the arrangement be done? Which number should come first? second? third? last?

Tell pupils that when the numbers are arranged in **increasing order**, the arrangement starts with the least number and ends with the greatest number.

2. **Performing the Activities**
   
a. Divide the pupils into two groups and let them continue “hanging” all the numbers in the clothesline. The first group is to hang the numbers in increasing order by comparing first the digits with the highest place value; in this case the thousands place.
   
   6 392  2 998  4 354  5 253
   
   Let another group do the hanging of another set of numbers on a clothesline in decreasing order.
   
   1 463  5 678  3 975  7 123
   
   b. Give 2 sets of number cards to the two groups. Instruct one group to arrange the first set of number cards in increasing order and the second group to arrange their cards in decreasing order. Tell them that this is a timed activity (5 minutes).
   
   Set 1:  4 163,  3 985,  5 421,  2 134,  3 154
   Set 2:  6 789,  1 567,  4 678,  1 987,  5 234
   
   Tell them to copy the arrangements done on their paper later.

3. **Processing the Activities**
Call on each group to post their work on the board. Have the pupils focus on what had been posted. Let them check if all the numbers were arranged correctly.

Ask: How can you say that the numbers were arranged in increasing order? in decreasing order?

If I have another number like 6 835, where would I place it in the first set? Why?

If I have another blank card and wanted to place it after the second number in the second set, what number should be written on the card?

Can we write the numbers in a column? If yes, how will they be arranged? (Many possible answers)

Which way of arranging numbers do you prefer, vertical or horizontal? Why?

4. Reinforcing the Concept
Ask the pupils to answer the exercises under Activities 1 and 2 in the LM. Check pupils’ answers.

Answer Key:
Activity 1: 1) 4 382, 4 381, 4 380, 4 379, 4 378  2) 5 732, 5 326, 5 324, 5 322, 5 320  3) 7 865, 7 854, 7 850, 7 845, 7 585
Activity 2: A. 1) 2 786, 2 787, 2 788, 2 789, 2 790  2) 5 000, 5 780, 5 860, 5 880, 5 980  3) 8 461, 9 742, 9 832, 9 904, 10 000
B. 1) 4 989, 4 988, 4 987, 4 986, 4 985  2) 9 400, 9 399, 9 299, 8 999, 8 299  3) 9 967, 8 374, 6 090, 6 000, 5 610

5. Summarizing the Lesson
How do we arrange numbers in decreasing order?
How do we arrange numbers in increasing order?

To arrange numbers in increasing or decreasing order, compare two numbers at a time, starting from left to right. Find out which is greater or lesser, then put them in the right order.

6. Applying to New and Other Situations
Ask the pupils to answer the exercises under Activity 3 of the LM.
Answer Key: 1) 1 976, 2 564, 2 839, 3 427  2) 9 357, 7 450, 6 983, 4 745

C. Evaluation
Guide pupils in working on Activity 4 in the LM. Check pupils’ answers.
Answer Key: 1) 8 543, 6 327, 4 327, 3 258, 1 765
2) 4 231, 4 452, 5 189, 7 675, 9 778

D. Home Activity
Ask the pupils to study the word problem then answer the exercises under Activity 5 in the LM.
Answer Key: Activity 5A
  Organization A’s Collection
  Ascending : 6 800, 7 500, 8 000, 8 600, 10 000
  Descending : 10 000, 8 600, 8 000, 7 500, 6 800
  Organization B’s Collection
  Ascending : 5 800, 6 600, 7 900, 8 500, 9 000
  Descending : 9 000, 8 500, 7 900, 6 600, 5 800

Activity 5 B – Answers vary; Example: 6 741, 6 147, 4 671, 1 674, 1 467

Lesson 8  Ordinal Numbers from 1st to 100th

Week 3

Objective
Identify ordinal numbers from 1st to 100th

Value Focus
Waiting for one’s turn

Prerequisite Concepts and Skills
1. Reading and writing numbers from 1 to 100
2. Reading and writing ordinal numbers from 1st through the 20th

Materials
Calendar, picture of children lined up, number cut-outs, fruits (real or drawing)

Instructional Procedures

A. Preliminary Activities

1. Drill

   Identify the place value of the underlined digit. Add more exercises as needed.

   571  5 376  6 725  3 096  9 827  8 360

2. Review
Show a picture of children lined one after another. Have them read the name of each child below the picture.

Lito  Roman  Bitoy  Ana  Jay  Riza  Gina  Maria  Jasna  Atoy

Name the child in the line.

Who is the first?  
Who is the fourth?  
Who is the sixth?  
Who is the second?  
Who is the third?  
Who is the fifth?  
Who is the 10th? 
Who is the 8th?  
Who is the ninth? 
Who is the 7th in line?

3. Motivation
Ask: Have you experienced falling in line during recess or meal time in the school canteen? What should you observe when falling in line?

Give other similar situations such as during flag ceremony, when receiving relief goods, and when buying tickets for rides during town fiesta. Ask the importance of falling in line in these situations.

B. Developmental Activities

1. Presenting the Lesson
Posing the Problem

Show the Filipino alphabet from the first letter up to the last.

Ask: How many letters does the Filipino alphabet have?

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>I</td>
<td>J</td>
<td>K</td>
<td>L</td>
<td>M</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>NG</td>
<td>O</td>
<td>P</td>
<td>Q</td>
<td>R</td>
<td>S</td>
</tr>
<tr>
<td>T</td>
<td>U</td>
<td>V</td>
<td>W</td>
<td>X</td>
<td>Y</td>
<td>Z</td>
</tr>
</tbody>
</table>
The letters of the alphabet are arranged with letter A being the first letter, B as the second, C as the third, and so on.

Ask: What does the arrangement of the letters of the alphabet indicate?
(The arrangement indicates the position or order of one letter in relation to the other letters.)

Explain to pupils how to write ordinal numbers.
To write ordinal numbers in symbol, connect the number with the letters  \textit{st} for numerals with the number 1 (1\textsuperscript{st}, first), \textit{nd} for numerals with the number 2 (2\textsuperscript{nd}, second), \textit{rd} for numerals with the number 3 (3\textsuperscript{rd}, third), and \textit{th} for numerals with the number 4 and above (4\textsuperscript{th}, fourth).

Except for eleventh, twelfth, and thirteenth (11\textsuperscript{th}, 12\textsuperscript{th}, 13\textsuperscript{th}), all other numbers take the letters \textit{th}.

Have the pupils read all the letters and let them take note of the ordinal numbers of all the letters in the alphabet.

Ask: What is the 21\textsuperscript{st} letter? (letter \textit{S})
21\textsuperscript{st} is an ordinal number.

How were you able to know the ordinal number of the letters?
(by counting, starting with the first letter)

How can ordinal numbers be written?
(Ordinal numbers can be written in words or in symbols.)

Write or show: 21\textsuperscript{st} can also be written as twenty-first
33\textsuperscript{rd} as thirty-third
44\textsuperscript{th} as forty-fourth

\textbf{2. Performing the Activities}
Say: In a writing period, the teacher’s objective is for the pupils to master the proper writing strokes so she asked them to write the Filipino alphabet four times in the same order.

ASK: What would be the 50\textsuperscript{th} letter? (Tor \textit{t}) 100\textsuperscript{th} letter? (\textit{NG} or \textit{ng})
What’s another way of writing the ordinal number 100th?

Say: Here are some numbers. Write th, rd, nd, or st as superscripts for each of the following to change them into ordinal numbers.

1. 31 ______________ 4. 81 ______________
2. 45 ______________
3. 33 ______________
4. 68 ______________
5. 92 ______________

This time, write the ordinal numbers in words.

<table>
<thead>
<tr>
<th>Ordinal Number</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: 25th</td>
<td>Twenty-fifth</td>
</tr>
<tr>
<td>1) 31st</td>
<td></td>
</tr>
<tr>
<td>2) 45th</td>
<td></td>
</tr>
<tr>
<td>3) 33rd</td>
<td></td>
</tr>
<tr>
<td>4) 81st</td>
<td></td>
</tr>
<tr>
<td>5) 68th</td>
<td></td>
</tr>
<tr>
<td>6) 92nd</td>
<td></td>
</tr>
</tbody>
</table>

3. Processing the Activities

What do we call numbers like 1st, 2nd, 3rd? (ordinal numbers)
What do ordinal numbers show?
How are ordinal numbers written?
Which ordinal numbers end with st? nd? rd? th?

Ask the pupils to practice writing ordinal numbers in words and in symbols.

Examples:

<table>
<thead>
<tr>
<th>In words</th>
<th>In symbols</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twenty-second</td>
<td>22nd</td>
</tr>
<tr>
<td>Thirty-fifth</td>
<td>35th</td>
</tr>
<tr>
<td>Forty-third</td>
<td>43rd</td>
</tr>
<tr>
<td>Sixty-first</td>
<td>61st</td>
</tr>
<tr>
<td>Sixty-fourth</td>
<td>64th</td>
</tr>
<tr>
<td>Seventy-seventh</td>
<td>77th</td>
</tr>
</tbody>
</table>

4. Reinforcing the Concept

a. Name the fruit and tell its position from 21st to 30th. Use mango as the point of reference and denote it as the 21st.
b. Ask the pupils to answer the exercises in Activities 1 and 2 in the LM. Check pupils’ answers.

5. **Summarizing the Lesson**

What are ordinal numbers? What do they tell? How are they written?

Lead pupils to say that ordinal numbers are numbers that indicate the position or order of an object or number in relation to other objects or numbers. When objects are placed in order, we use ordinal numbers to tell their position.

To write ordinal numbers in symbol, use superscript letters st for numerals with the number 1 (1st, first), nd for numerals with the number 2 (2nd, second), rd for numerals with the number 3 (3rd, third), and th for numerals with the number 4 and above (4th, fourth; 29th, twenty-ninth).

Examples of ordinal numbers are first, second, third, fourth, twenty-ninth, eighty-eighth.

6. **Applying to New and Other Situations**

Ask the pupils to answer the exercises under Activity 3 in the LM. Provide help as needed.

C. **Evaluation**

Ask the pupils to answer the exercises under Activity 4 in the LM. Check pupils’ answers.

Answer Key: 9th, 13th, 21st, 26th, 44th, 50th, 67th, 71st, 91st, 93rd, 96th, 100th

D. **Home Activity**

Ask the pupils to read and answer the problem under Activity 5 in the LM. Tell pupils they need the 2012 calendar to solve the problem.

Answer Key:  
A. 1) Monday  2) Tuesday  3) Sunday  4) Wednesday  
B. 1) **Nelia - Faye - Aliza - Mary Joy**, then Aliza is the 3rd  2) 72  
3) a. Tuesday  b. Thursday

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**Lesson 9 Recognizing Coins and Bills up to PhP1 000**

**Week 3**
**Objective**
Recognize coins and bills up to PhP 1,000

**Value Focus**
Sharing and saving money

**Prerequisite Concepts and Skills**
1. Reading and writing money through PhP100
2. Counting and telling the value of coins and bills up to PhP100

**Materials**
Philippine money or play money (bills and coins), flash cards

**Instructional Procedures**

A. **Preliminary Activities**

1. **Drill**
   
   Count numbers orally through 100.
   Skip count by 2s, 5s and 10s through 1,000.

2. **Review**
   
   Lay the play money or real money of different denominations on the table. Using flash cards, let pupils read the following and pick the correct bill or coin that corresponds to each.

   - twenty-five centavos
   - five pesos
   - twenty pesos
   - one peso
   - five centavos
   - ten centavos

3. **Motivation**
   
   Say: Nilo is counting the Philippine coins and bills he saved for one year.
   Show three 100-peso bills, one fifty-peso bill and four 20-peso bills.
   Can you identify the bills and coins he has saved?

   Let the pupils name the coins and bills that Nilo has.
   Ask: What do you see in each of the Philippine coins and bills?

B. **Developmental Activities**

1. **Presenting the Lesson**
   
   Show the following Philippine coins and bills one at a time. Call on pupils to give the value of these coins and bills.
2. Performing the Activities
Tell pupils to describe each paper bill. (Let the pupils recognize the paper bills by its markings, face and color.)
   a. Twenty-pesos
   b. Fifty pesos
   c. One hundred pesos
   d. Two hundred pesos
   e. Five hundred pesos
   f. One thousand pesos

3. Processing the Activities
Distribute play money (paper bills and models of different Philippine coins) to the pupils. Tell them to examine the play money.

   Ask:  What picture can be seen on each side of the coins? the bills?
         How fast can you recognize paper bills? Can you give their exact amount?

   Say:   I have paper bills here. Identify them. (Flash the paper bills one at a time and the pupils identify them).
How were you able to recognize each paper bill that fast? (Possible answers: Each paper bill has a different color, number/amount and image printed on it.)

For color:
- orange for PhP20
- red for PhP50
- blue for PhP100
- green for PhP200
- yellow for PhP500
- violet for PhP1,000

How about the coins, how are they different from one another? (Let the pupils describe each coin.)

4. **Reinforcing the Concept**
Form pupils into two groups and have them do Activity 1 in the LM. Check their answers. Group 1 will answer Activity 1 A and Group 2 Activity 1 B.

Check if pupils can recall the images in the paper bills. Have them use their “Show Me” boards to answer Activity 2 in the LM.

5. **Summarizing the Lesson**
Ask: What features of the paper bill will help you identify or recognize it?

- How are the coins different from one another?

Aside from the marked amount, paper bills can be recognized by their colors and the faces of some Filipino heroes printed on them.

The coins can be recognized by their marked amount, sizes, color and images or faces printed on one side of the coin.

6. **Applying to New and Other Situations**
A. Ask the pupils to read and answer the questions in Activity 3 in the LM. Discuss how the pupils get the answers.

   Answer Key: 1) one 100-peso bill, two 20-peso bills, five 5-peso coins; PhP145  2) 14  3) PhP100; one 50-peso bill, two 20-peso bills, two 5-peso coins

B. Show a picture of a child saving money.

   Ask: Why is the child saving money? Is it good to save money? Why? Do you also save money? Why?
C. **Evaluation**

Have pupils match the paper bill with the names of the heroes printed on the bill under Activity 4 in the LM.

**Answer Key:** 1) D  2) C   3) E    4) B   5) F

D. **Home Activity**

Ask pupils to identify the paper bills and coins in Activity 5 in the LM.

**Answer Key:**
1) one 100-peso bill, one 50-peso bill, two one-peso coins
2) one 100-peso bill, one 10-peso coin, one 5-peso coin, two 1-peso coins
3) one 500-peso bill, one 200-peso bill, two 100-peso bills, five 5-peso coins
4) one 20-peso bill, one 100-peso bill, one 500-peso bill
5) one 1000-peso bill, one 50-peso bill

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**Lesson 10 Reading and Writing Money in Symbols and in Words**

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**Week 3**

**Objective**
Read and write money in symbols and in words through PhP1 000 in pesos and centavos

**Value Focus**
Honesty, Thriftiness

**Prerequisite Concepts and Skills**
1. Reading and writing numbers up to PhP1 000
2. Reading and writing money in symbols up to PhP100
3. Recognizing coins and bills up to PhP1000

**Materials**
Philippine money or play money (bills and coins), flash cards, pictures of tagged items or goods, “Show Me” boards

**Instructional Procedures**

A. **Preliminary Activities**

1. **Drill**

   Reading numbers using flash cards

   Call 2 pupils to stand at the back. Flash each card. The first to read the number correctly will step forward. The first to reach the designated
line wins. Then, call another pair of contestants. Do this as snappily as possible.

Sample number cards:

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>164</td>
<td>376</td>
<td>511</td>
<td>409</td>
<td>918</td>
<td>1000</td>
</tr>
</tbody>
</table>

2. **Review**

Use real money to review pupils in recognizing the different values of the different denominations of Philippine coins and bills through PhP1 000.

3. **Motivation**

Play the relay game, “Super Sale.”

Form two groups of five members each. Give each group a shirt and a notebook with a tag price up to PhP100. Put a tray of coins and bills in front. Each member of the group will get a coin or a bill from the tray then goes back to his/her group for the next player to do the same. Follow the same procedure for the other item. The first group to get the amount equivalent to the tag price of each item wins.

Group A
- notebook
- PhP35
- T-shirt

Group B
- notebook
- PhP27
- T-shirt

B. **Developmental Activities**

1. **Presenting the Lesson**

Give this situation:

Amanda accompanied her mother in going to the market. After buying an item, mother got her change of several paper bills and coins. She asked Amanda to count if the change was correct. Amanda noted that the change given were paper bills of different colors and coins of different sizes:

<table>
<thead>
<tr>
<th>Paper bills</th>
<th>Coins</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 orange bills</td>
<td>5 silver color coins</td>
</tr>
</tbody>
</table>
Say: Let’s help Amanda count the change. Call on one pupil to read the bills and the coins.

Ask: How much is the change in all? What is the symbol for peso? for centavo?

Tell pupils to write on their drill board the amount in words and in symbol.

2. Performing the Activity

Ask: What paper bills and coins were included in the change counted by Amanda?

Tell pupils to count the number of each kind of paper bills and coins and write the partial amount on their drill board.

- 5 orange paper bills = PhP100
- 5 silver colored coins = PhP5
- 2 red paper bills = PhP100
- 3 gold colored coins = PhP15
- 1 yellow paper bill = PhP500
Write the partial amounts on the board and have pupils read them.

PhP100  PhP5  PhP100  PhP15  PhP500

Tell the class to add the amounts. Call one pupil to write the amount in symbol and another to read the total amount. (PhP720)

Say: The total amount of change is seven hundred twenty pesos.

3. **Processing the Activity**

Call on pupils to answer.

- How many paper bills did mother receive? How many coins?
- What did you do to easily count the change?
- What is the total amount of change?
- What symbol/sign do we use in writing money in different denominations?

Explain the importance of using the peso sign in writing money in symbol.

4. **Reinforcing the Concept**

a. Put strips of paper under pupils’ chairs before the class starts. Tell one pupil to look under his/her chair and read what is written, while another pupil writes it on the board. Ask the class if it was read or written correctly. Do the same with the rest of the strips. Emphasize that the decimal point is read as “and.”

<table>
<thead>
<tr>
<th>PhP250.50</th>
<th>PhP380.75</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhP348.75</td>
<td>PhP798.25</td>
</tr>
<tr>
<td>One hundred twenty-six and twenty-five centavos</td>
<td>Five hundred eighty-nine and ninety centavos</td>
</tr>
<tr>
<td>PhP986.20</td>
<td>PhP675.55</td>
</tr>
<tr>
<td>Eight hundred fifty and fifty centavos</td>
<td>Nine hundred thirty-five and twenty-five centavos</td>
</tr>
</tbody>
</table>
b. Ask pupils to form four groups. Distribute play money to pupils and buy the items listed with their money. Refer them to Activity 1 in the LM. Guide pupils in doing the exercise.

c. Read the cost of each item. Then, write the amount in your notebook. e.g. 

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoe</td>
<td>PhP280.75</td>
</tr>
<tr>
<td>Dress</td>
<td>PhP550.25</td>
</tr>
<tr>
<td>Pants</td>
<td>PhP399.95</td>
</tr>
</tbody>
</table>

5. **Summarizing the Lesson**
How do we read and write money in symbol through PhP1 000?

- We read and write money in words and symbols.
- In writing the symbols, we write first the peso sign. We use **PhP** for peso.
- A period is used to separate pesos and centavos.
- The point is read as “and.”

Example:
Written in words: twenty-five pesos and fifty centavos
Written in symbol: PhP25.50

6. **Applying to New and Other Situations**
a. Ask pupils to answer the exercises in Activity 2 in the LM. Give other exercises when deemed necessary.

   **Answer Key:**
   1) a. many possible combinations  
      b. 2 five hundred-peso bills  
   2) a. 5 one hundred-peso bills  
      b. 10 fifty-peso bills  
   3) a. 1 two hundred-peso bill  
      b. 2 one hundred-peso bills  
   4) 1 two hundred-peso bills, 1 one hundred-peso bills and 3 ten-peso coins  
   5) 1 five hundred-peso bill, 2 two hundred-peso bills, 1 fifty-peso bill and 4 ten-peso coins

b. Tell pupils to list down at least five things that their mother buys in the market or the grocery store like salt, sugar and oil. Let them indicate the price beside the item and write how much money their mother should have to be able to buy the items.

C. **Evaluation**
Give the exercises in Activity 3 in the LM, first the oral then the written exercises.
Answer Key:
B. 1) PhP416.00  2) PhP285.00  3) PhP713.15  4) PhP834.11  
      5) PhP922.16

D. **Home Activity**

Have pupils work on Activity 4 at home. Discuss pupils’ answers in class.

Answer Key:
A. 1) 150 pesos and 25 centavos  2) 212 pesos and 75 centavos  
      3) 763 pesos and 50 centavos  4) 874 pesos and 25 centavos  
      5) 946 pesos and 50 centavos
B. 1) PhP641.25  2) eight hundred pesos and fifteen centavos  
      3) PhP356.13  4) five hundred five pesos and five centavos  
      5) PhP428.30

---

**Lesson 11  Comparing Money through PhP500**

**Week 4**

**Objective**

Compare values of the different denominations of coins and bills through PhP500 using relation symbols

**Value Focus**

Wise spending

**Prerequisite Concepts and Skills**

1. Comparing whole numbers using relation symbols  
2. Identifying value of money in bills and coins  
3. Reading and writing money in symbols through PhP500  
4. Place value of whole numbers

**Materials**

Pictures of items with tag prices, “Show Me” board, flash cards

**Instructional Procedures**

A. **Preliminary Activities**

1. **Drill**
   
   Give practice on reading money in symbols through PhP500. Use flash cards as snappily as possible.

2. **Review**
   
   Using your “Show Me” boards, write the money in symbol as shown in each strip of paper. Then, read the amount of money you wrote.
3. **Motivation**

Call on one boy and one girl in front while the rest of the class observe. Show real money of different denominations. As much as possible, show them the old and new faces or versions of Philippine money that are both still in use.

Say: Let’s suppose I am your father and I am giving you your allowance for one week.

Give the boy one 100-peso bill and one 50-peso bill. Give the girl two 50-peso bills, two 20-peso bills and one ten-peso bill.

Ask: How much did the girl receive?
How much did the boy receive?

Give another situation:

The jeepney fare from your house to your school is twelve pesos while your classmate’s fare for a tricycle ride from their house to the same school is fifteen pesos. Who pays more for the ride?

B. **Developmental Activities**

1. **Presenting the Lesson**

Ask: In the first situation above, who received more allowance, the boy or the girl? How much did the boy receive? What about the girl? How did you compare the amounts they received? (Start from the digits with the biggest place value then add the amounts.)

In the second situation, how much fare was paid for the jeepney? for the tricycle? Which fare was more? Which was less? How would you compare the fares?

2. **Performing the Activity**
Have pupils work in groups. Give each group two sets of paper bills and/or coins. Have them tell the value of each set. Then, ask which among each set has a bigger value. You may use play money.

**Set A**

1. PhP50.50

2. PhP98.00

3. PhP50.00

4. PhP200.00

**Set B**

1. PhP50.75

2. PhP68.25

3. PhP20.00

4. PhP100.00

Ask: How will you compare the values of each set of coins and bills? (Elicit from the students the use of greater than and less than.)

Say: This time I will say two amounts of money. Compare their amounts by writing <, >, or = on your drill boards.
Ask: In which activity is it easier for you to compare amounts of money? Why?

3. Processing the Activity
Ask: What relation symbols did we use in comparing money?
   When do we use >? What about the symbol <? the symbol =?

   How do we compare the values of money?
   Why is it important to learn to compare values of Philippine coins and bills? On what occasions do we use this skill?

4. Reinforcing the Activity
Let the pupils work in pairs. Show the items with their corresponding amounts. Then answer the questions that follow.

   PhP499.00  PhP95.50  PhP199.95  PhP190.95
   PhP95.50  PhP350.00  PhP199.95  PhP190.95
   PhP350.00  PhP199.95  PhP190.95
   PhP199.95  PhP190.95

Ask: Which item is the cheapest?
Which item is the most expensive?
Which is cheaper, the bag or the umbrella?
Which is more expensive, the sunglasses or the shirt?

If you have PhP500.00, which items would you buy? Why?
What did you consider in choosing those items to be bought?
Ask your partner which items he/she would buy and why.

Have pupils count the bills and coins then write the relation symbol for each pair in Activity 1 in the LM.

Ask pupils to write the relation symbols between each pair of amounts under Activity 2 in the LM.
5. **Summarizing the Lesson**

Ask: What symbols do we use to show the relation of the value of money?

- Use the symbols $>$, $<$, $=$ to show the relation of the value of money.

How do we compare value of money?

- Know the value/amount of money before comparing them.
- Start comparing the digits from the biggest place value to the least place value.

6. **Applying to New and Other Situations**

Group the class into four. Give each group 3 pairs of envelope containing bills and coins. (Use play money).

Ask them to count and compare the two amounts of money in each pair.
Let them write the facts in number sentences.

Example: PhP79.25 $>$ PhP65.05

Ask each group to report their work in the class.

Ask the pupils to answer the exercises under Activity 3 in the LM.

**Answer Key:**

A. 1) PhP23 < PhP25 2) PhP60.40 > PhP60 3) PhP250 > PhP140 4) PhP500 > PhP250

B. 1) PhP645.50 $>$ PhP280.75 2) PhP399.95 < PhP540.95 3) PhP698.95 $>$ PhP295.45

C. **Evaluation**

Ask the pupils to compare the denominations of bills and coins in Activity 4 in the LM.

**Answer Key:**

<table>
<thead>
<tr>
<th>1) PhP110.00</th>
<th>&lt;</th>
<th>PhP140.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>2) PhP270.00</td>
<td>&gt;</td>
<td>PhP200.00</td>
</tr>
<tr>
<td>3) PhP320.00</td>
<td>&lt;</td>
<td>PhP500.00</td>
</tr>
<tr>
<td>4) PhP470.00</td>
<td>&gt;</td>
<td>PhP400.00</td>
</tr>
<tr>
<td>5) PhP450.00</td>
<td>&lt;</td>
<td>PhP500.00</td>
</tr>
</tbody>
</table>

D. **Home Activity**

Ask the pupils to work on the exercises in Activity 5 at home. Tell pupils to ask the help of their parents. Check pupils' answers.
Lesson 12  Comparing Money through PhP1 000

Week 4

Objective
Compare values of the different denominations of coins and bills through PhP1 000

Value Focus
Thrift

Prerequisite Skills
1. Comparing whole numbers using relation symbols
2. Identifying value of money in bills and coins
3. Comparing values of the different denominations of coins and bills through PhP500 using relation symbols

Materials
Pictures of Items with tag prices, Show-Me Board, flash cards, chart, play money

Instructional Procedures

A. Preliminary Activities

1. Drill
Comparing numbers in symbols using >, <, =.
Do this as snappily as possible.

<table>
<thead>
<tr>
<th>Money</th>
<th>Symbol</th>
<th>Different Denominations</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>418</td>
<td>820</td>
</tr>
<tr>
<td>899</td>
<td>950</td>
<td>409</td>
</tr>
</tbody>
</table>

2. Review
Use different denominations of money (teacher-made or play money) to have an equal value with the money in the table. Paste them in the space provided. The first one has been done for you to follow.

<table>
<thead>
<tr>
<th>Money</th>
<th>Symbol</th>
<th>Different Denominations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>=</td>
<td></td>
</tr>
<tr>
<td></td>
<td>=</td>
<td></td>
</tr>
</tbody>
</table>
3. **Motivation**

Ask the pupils the fruit bearing trees they have in their backyard. Ask further what they do with the fruits, especially when their harvest is more than they can consume. Call on volunteers to name the common fruits that are being sold in the market.

B. **Developmental Activities**

1. **Presenting the Lesson**

   Present this situation on a chart.

   Mother is planning to go to market. She has the following paper bills and coins inside her wallet:

   ![Image of paper bills and coins]

   She asked father for additional money so he looked inside his wallet and found these:

   ![Image of paper bills and coins]

   1. How much is in mother’s wallet? What combinations of bills and coins are there?
2. How about father, what bills and coins are in his wallet? How much does he have?

(Combinations of one 200-peso bill, two 100-peso bills, one 50-peso bill, two 1-peso coins, two 25-centavo coins, one 10-centavo coin, and one 5-centavo coin; PhP452.65)

Let the pupils answer the questions in the situation given. Lead them to arrive at the answer to the problem by enumerating first the different denominations of bills and coins and then their corresponding values.

2. Performing the Activity

Have the pupils work in pairs.

Ask: Who has more money, mother or father?

If you are to count the number of bills and coins, how many bills and coins does mother have? (3 bills and 6 coins)

How about father, how many bills and coins are in his wallet? (4 bills and 6 coins)

So, why can’t we say that father has more money when he has more bills and coins than mother?

Say: Let us compare their money by giving the value of the denominations each of them has.

Let us look at the table.

<table>
<thead>
<tr>
<th></th>
<th>Bills</th>
<th>Value</th>
<th>Amount of bills</th>
<th>Coins</th>
<th>Value</th>
<th>Amount of coins</th>
<th>Total amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>1 PhP200</td>
<td></td>
<td>PhP200</td>
<td>1 PhP10</td>
<td></td>
<td>PhP16.25</td>
<td>PhP336.25</td>
</tr>
<tr>
<td></td>
<td>1 PhP100</td>
<td></td>
<td>PhP100</td>
<td>1 PhP5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 PhP20</td>
<td></td>
<td>PhP20</td>
<td>1 PhP1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 10 ₱</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 5 ₱</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father</td>
<td>1 PhP200</td>
<td></td>
<td>PhP200</td>
<td>2 PhP1</td>
<td></td>
<td>PhP2.65</td>
<td>PhP452.65</td>
</tr>
<tr>
<td></td>
<td>2 PhP100</td>
<td></td>
<td>PhP200</td>
<td>2 25 ₱</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 PhP50</td>
<td></td>
<td>PhP50</td>
<td>1 10 ₱</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 5 ₱</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ask: Is there another way to compare their money? How?

Is the recognition of Philippine money bills and coins important in
comparing values of different denominations of bills and coins? Why?

3. **Processing the Activity**
   Divide the class into 4 groups and have them act out the situation and come out with a final scene. (Different possibilities)

   Guide them by asking: Will mother proceed in going to market? What items or goods could she buy?

4. **Reinforcing the Concept**
   a. Divide the class into 2 groups and work on these activities (written on an index card), then give each group an envelope which contains play money bills and coins (do not include PhP1 000 bill).

   Group 1: How would you make PhP1 000 with the fewest bills and coins?

   Show it in 2 different combinations.

<table>
<thead>
<tr>
<th></th>
<th>Bills</th>
<th>Coins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Set 2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   Group 2: How would you make PhP1 000 with the fewest bills?

   Show it in 2 different combinations

<table>
<thead>
<tr>
<th></th>
<th>Bills</th>
<th>Coins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Set 2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   (After checking their answers and if there is still time, ask the two groups to exchange their index cards and work on the activity first done by the other group.)

   b. Ask the pupils to answer Activity 1 in the LM.

5. **Summarizing the Lesson**
   Ask: How do we compare values of different denomination of bills and coins?

   - We should know the amount of money before comparing them. We start comparing the digits on the biggest place value to the least place value.
   - Write the value of each kind of bills and coins, then add.
• Use the symbols >, <, = to show the relation of the value of money.

6. Applying a New and Other Situations
   Ask the pupils to answer Activity 2 in the LM.
   Answer Key: Answers vary
   Example: 1) four 100-peso bills, one 10-peso coin, one 1-peso coin
            2) one 200-peso bill, one 50-peso bill, one 20-peso bill, one 1-peso coin,
               one 25-centavo coin

C. Evaluation
   Ask pupils to answer Activities 3 and 4 in the LM. Check pupils’ answers.
   Answer Key:
   Activity 3: 1) PhP600.00 > PhP450.00    2) PhP550.00 < PhP580.00
   Activity 4: 1) 1,000 pieces    2) 100 pieces    3) 10 pieces    4) 5 pieces
            5) 2 pieces

D. Home Activity
   Ask the pupils to answer the tasks in Activity 5 in the LM.
   Answer Key: 1) Answers vary, Ex. one 500-peso bill, four 100-peso bills, one
               25-centavo coin    2) answers depend on the prevailing prices of the items
               in the community

Lesson 13   Adding 3- to 4-Digit Numbers without Regrouping

Week 4

Objective
Add 3- to 4-digit digit numbers up to three addends with sums up to 10,000
without regrouping.

Value Focus
Cleanliness

Prerequisite Concepts and Skills
Adding 2- to 3-digit numbers up to two addends with sums up to 1,000
without regrouping

Materials
Flash cards, number cards 0–9, printed exercises and story problem, place
value chart

Instructional Procedures

A. Preliminary Activities
1. Drill
   Play a “Bring Me” game to drill on addition basic facts using flash cards.

   Form pupils into two groups of 10 pupils each. Give each pupil number cards 0–9.
   Say these addition facts to pupils.

   1. Bring me $12 + 10$
   2. Bring me $9 + 8$
   3. Bring me $14 + 32$
   4. Bring me $41 + 11$
   5. Bring me $23 + 40$

   For each round, the pupils must bring the card with the correct answer to the number problem.
   The first group to bring the correct number card gets a point.
   The first group to score five points wins the game.

2. Review
   Write the letter of the correct answer to the addition problem on the chalkboard.

   1) $214 + 21$
      a. 235  b. 532  c. 325  d. 523

   2) $214 + 123$
      a. 316  b. 337  c. 349  d. 637

   3) $365 + 412$
      a. 767  b. 677  c. 778  d. 777

   Answer Key: 1) a  2) b  3) d

3. Motivation
Show the picture or similar picture to the class.
Ask: What is the picture all about?
   How would you help maintain the cleanliness in your
   community? in your school?
   Let’s see whose desks will remain clean up to the last minute of
   the class.

B. Developmental Activities

1. Presenting the Lesson

   Present this problem.
   In response to the municipality’s “Clean and Green” campaign,
   the Boy Scouts and Girl Scouts of Barangay Malinis held a tree planting
   activity. They planted 1,432 narra seedlings, 3,124 mahogany
   seedlings and 1,300 ipil-ipil seedlings. How many seedlings did they
   plant in all?
   Ask: What was the campaign of the municipality?
   Who participated in the municipal campaign?
   What did they plant?
   How many of these seedlings were planted?
   narra seedlings _______
   mahogany seedlings _______
   ipil-ipil seedlings _______

   Lead the pupils in analyzing the problem. Illustrate the problem using
   flats, longs and ones.
   Express the grouping into symbols by writing the equivalent numbers
   into expanded form.
   Add the numbers in expanded form. Then write the sum in standard
   form.

   Expanded form:
   \[
   1432 = 1000 + 400 + 30 + 2
   3124 = 3000 + 100 + 20 + 4
   + 1300 = 1000 + 300 + 00 + 0
   \]
   \[
   \begin{array}{l}
   \hline
   & \text{Thousands} & \text{Hundreds} & \text{Tens} & \text{Ones} \\
   \hline
   1 & 4 & 3 & 2 \\
   \hline
   \end{array}
   \]
   \[
   5856 = 5000 + 800 + 50 + 6 = 5856
   \]

   Present another way of adding numbers. Put the given numbers in the
   place value chart before adding them. Emphasize that the numbers
   must be written in the appropriate column, otherwise they will arrive at
   the wrong answers.

   \[
   \begin{array}{l}
   \hline
   & \text{Thousands} & \text{Hundreds} & \text{Tens} & \text{Ones} \\
   \hline
   1 & 4 & 3 & 2 \\
   \hline
   \end{array}
   \]
Do the steps one at a time.

First: Add the ones.  
\[
\begin{array}{c}
1432 \\
3124 \\
1300 \\
\hline
56
\end{array}
\]

Next: Add the tens.  
\[
\begin{array}{c}
1432 \\
3124 \\
1300 \\
\hline
56
\end{array}
\]

Then: Add the hundreds.  
\[
\begin{array}{c}
1432 \\
3124 \\
1300 \\
856 \\
\hline
5856
\end{array}
\]

Finally: Add the thousands.  
\[
\begin{array}{c}
1432 \\
3124 \\
1300 \\
\hline
5856
\end{array}
\]

Present more examples. Do the steps one at a time. Stress that the numbers must be written first in their appropriate column.

2. Performing the Activity
Write the addends in column form with the digits properly aligned. Then find the sum. Write your answers in your notebook.

1) 1150 + 2034 + 2011  (answer: 5195)
2) 1131 + 1140 + 1023  (answer: 3294)
3) 2032 + 1221 + 1212  (answer: 4465)
4) 1213 + 1331 + 3124  (answer: 5668)

3. Processing the Activity
Ask: What steps do we follow in adding numbers? Explain the steps in adding numbers. Remind pupils to always align the numbers in their proper columns.

4. Reinforcing the Concept
Have pupils answer the exercises under Activity 1 on their papers. Answer Key:

1) 14687  2) 8343  3) 9333

5. Summarizing the Lesson
Ask: What should be done first before adding 3–to 4-digit numbers? How do we add 3- to 4-digit numbers up to three addends with sums up to 10000?

- Before adding, write first the numbers in their proper columns.
- To add whole numbers with 3 to 4 digits, add the ones first, next add the tens, then the hundreds, and lastly, the thousands.

6. Applying to New and Other Situations
Ask the pupils to read the sheet under Activity 2 in the LM on the number of enrolment in Gen. Gregorio del Pilar Elementary School. Have them write their computations on their paper.

Answer Key:
1) 4 222  2) 3 566  3) 6 588  4) a. 4 655    b. 5 444    c. 5 688
5) school year 2012

C. Evaluation
Tell pupils to answer Activity 3 in the LM. Have them write the numbers in column before finding the sum. Let them write the answer on their paper.

Answer Key:

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>3 052</td>
<td>2)</td>
<td>5 143</td>
<td>3)</td>
</tr>
<tr>
<td>4 614</td>
<td>1 705</td>
<td>3 104</td>
<td>1 703</td>
<td>1 370</td>
</tr>
<tr>
<td>+ 1 231</td>
<td>+ 2 030</td>
<td>+ 4 123</td>
<td>+ 2 112</td>
<td>+ 1 003</td>
</tr>
<tr>
<td>8 897</td>
<td>8 878</td>
<td>8 899</td>
<td>9 899</td>
<td>7 789</td>
</tr>
</tbody>
</table>

D. Home Activity
Let the pupils work on Activity 4 in the LM at home. Ask them to look at the picture before answering the questions.

Answer Key: 1) 60    2) 150    3) 120    4) 455

Lesson 14 Adding 3- to 4-Digit Numbers with Regrouping

Week 4

Objective
Add 3- to 4-digit digit numbers up to three addends with sums up to 10 000 with regrouping

Value Focus
Value of recycling things

Prerequisite Concepts and Skills
1. Adding 2 – 3 digit numbers up to two addends with sums up to 1 000 with regrouping
2. Addends with sum up to 1 000
3. Adding 3– to 4-digit numbers up to 10 000 without regrouping

Materials
Printed exercise, chalkboards

Instructional Procedures
A. Preliminary Activities

1. Drill
   Pair pupils. Play a relay game “Name the Babies.”
   Say aloud: The name of the mother is 12. Name the babies. (Pupils will give addition combinations that will give 12 as the sum). The pair who would give the correct answer first wins a point. The pair with the most points wins the game.

2. Review
   A. Answer the following questions:
      1) What is 27 more than 15? (42)
      2) What is the sum of 216 and 248? (464)
      3) If one of the addends is 19 and the sum is 43, what is the other addend? (24)
      4) If you add 72 and 18, what is the total? (90)
      5) What is 138 increased by 15? (153)
      6) If the sum is 12, what are the two possible even addends that you can give? How about two odd addends? (even: 6 & 6, 8 & 4, 10 & 2; for odd addends: 3 & 9, 5 & 7, 11 & 1)

   Add:
   1) 1 415
      + 2 041
      Answer Key: 1) 8 879
   2) 1 310
      + 1 211
      Answer Key: 2) 4 822
   3) 1 246
      + 4 212
      Answer Key: 3) 5 578
   4) 5 332
      + 1 023
      Answer Key: 4) 8 856
   5) 1 243
      + 1 100
      Answer Key: 5) 5 566

3. Motivation
   Who among you reads newspapers? What does your family do with the newspapers?
   Why do you need to recycle them?
   What is the value of recycling at home?

B. Developmental Activities

1. Presenting the Lesson
   Story Problem
   Have the pupils listen to a story problem.

   The primary pupils of Masaya Elementary School brought plastic bottles to support the school’s “Plastic Bottle Fund Drive”.

   Ask: What did the pupils bring?
   Why did they bring plastic bottles?
   Let the pupils give the number of plastic bottles brought by each grade.
Plastic Bottle Fund Drive

<table>
<thead>
<tr>
<th>Grade</th>
<th>Plastic Bottles (Contribution)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinder</td>
<td>834</td>
</tr>
<tr>
<td>Grade I</td>
<td>1 272</td>
</tr>
<tr>
<td>Grade II</td>
<td>1 321</td>
</tr>
<tr>
<td>Grade III</td>
<td>2 526</td>
</tr>
</tbody>
</table>

Have the pupils study the table and let them answer the following questions:

1. Who bought the most plastic bottles?
2. Who bought the least?
3. How many plastic bottles did the pupils bring in all? (5 953)
4. How did you come up with your answer?

Guide the pupils in analyzing the problem. Have them write the numbers on the place value chart.

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

Emphasize the importance of putting numbers in proper column. Copy the numbers the way they are written. Show how addition is done from right to left. Emphasize the process of regrouping on a certain place, that is regrouping is done when the sum of the numbers in a place is ten or more.

Have the pupils study and follow the steps in adding numbers with regrouping.

**Step 1**
Add the ones.
4 + 2 + 1 + 6 = 13
Renamed 13 as 1 ten and 3 ones.
Regroup 11 to the tens place.

**Step 2**
Add the tens.
1 + 3 + 7 + 2 + 2 = 15
Rename 15 as 1 hundred and 5 tens.
Write 5 under the tens column. Regroup 1 to the hundreds place.

**Step 3**
Add the hundreds.
1 + 8 + 2 + 3 + 5 = 19

**Step 4**
Add the thousands.
1 + 1 + 1 + 2 = 5
Rename 19 as 1 thousand and 9 hundreds.
Write 9 under the hundreds column.
Regroup 1 to the thousands place.

Ask the children to use the same procedure in solving/answering the questions in the presentation of the table.

Present other exercises for children to work on.

\[
\begin{array}{ccc}
3572 & 2125 \\
2415 & 2553 \\
+973 & 2321 \\
+2432 & \\
\end{array}
\]

Answer Key: 6960 and 9431

2. Performing Activities

Work in Pairs.

Arrange the numbers in each box in column then add and check.

\[
\begin{array}{ccc}
1614, 1948, 1321 & 1742, 326, 3287 \\
2641, 1376, 2213 & 4231, 1323, 1264 \\
742, 5411, 3211 & \\
\end{array}
\]

Individual Activity

1) 2344 \\
1265 \\
+526

2) 678 \\
4324 \\
+1125

3. Processing the Skills

Ask: How did you add the numbers in each box?
How did you arrange them?
Where did you start adding?
What did you do when you got a sum of 10 or more in one column?
In which place was regrouping done?

4. Reinforcing the Concept

Let the pupils do the exercises in Activity 1 in the LM. Have them write their answers on their paper.
5. **Summarizing the Lesson**
How do we add 3- to 4-digit numbers with three addends with regrouping?

- Before adding, write first numbers in column.
- To add whole number with 3- to 4-digit, add the ones first, next add the tens, then the hundreds and lastly, the thousands.
- Regroup if needed.

6. **Applying to New and Other Situations**
Refer pupils to Activity 2 in the LM. Ask them to look at the number chart to find out the total number. Let them do the activity on their own paper.

**Answer Key:**
1) a. 4758  b. 2388  c. 2647  d. 5097  e. 5601

**C. Evaluation**
Have pupils do Activity 3 in the LM. Assess the result of the test.

**Answer Key:**
1) 5254  2) 7716  3) 16236  4) 8928  5) 5621

**D. Home Activity**
Let the pupils copy the exercises under Activity 4 and Activity 5 in their notebooks. Ask them to work on them at home.

**Answer Key:**
Activity 4 - 1) 1779  2) 3965  3) 7473  4) 6717  5) 5717  6) PhP4560.00
Activity 5 - 1) PhP43.00  2) PhP40.00  3) No, because she only has PhP25.00 and the total cost of the snack is PhP35.00.
  4) PhP60.00 for sopas, pansit and hot chocolate or sandwich

---

**Lesson 15 Estimating Sums of 3- to 4-Digit Addends**

**Week 5**

**Objective**
Estimate the sum of 3- to 4-digit addends using appropriate strategies

**Value Focus**
Entrepreneurship

**Prerequisite Concepts and Skills**
Rounding off numbers

Materials
Printed exercises, chalkboards, number wheels

Instructional Procedures

A. Preliminary Activities

1. Drill
   Group pupils into tens
   a. Give each group a chalkboard.
   b. Let the pupils listen attentively as you give a word problem.
   c. Members of the group will work cooperatively to come up with the correct answer.
   d. The group with the most correct answers wins the game.

   Word problems to be asked:
   a. What is the sum of 9 and 6? (15)
   b. What number is 4 more than 8? (12)
   c. Combine 7 and 6. (13)
   d. Think of two numbers whose sum is 14. (1&13, 2&12, 3&11…etc)
   e. Think of two addends whose sum is 18. (1&17, 2&16, 3&15…etc)

2. Review
   Let a pupil pick a card in the box and answer the written exercise on it orally.

   \[
   \begin{array}{cccc}
   1500 + 100 & 300 + 200 & 2000 + 100 & 3800 + 100 \\
   260 + 110 & & & \\
   \end{array}
   \]

3. Motivation
   Distribute “Show Me” boards to the pupils. Show the number wheels. Spin the wheels and let pupils see where the pointer stops. Instruct them to round the number where the pointer stops.

   When the pointer stops at the white part of the wheel, round off the number to the nearest tens. When it stops on the black, round the number to the nearest hundreds.

   When the pointer stops at the white part of the wheel, round off the number to the nearest hundreds. When it stops on the black, round to the nearest thousands.
B. Developmental Activities

1. Presenting the Lesson
Show the pupils these segments of the number line.

A.

<table>
<thead>
<tr>
<th>100</th>
<th>120</th>
<th>140</th>
<th>160</th>
<th>180</th>
<th>200</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>220</td>
<td>240</td>
<td>260</td>
<td>280</td>
<td>300</td>
</tr>
</tbody>
</table>

Have them study each segment of the number line. Ask from what number each one starts with and ends. (Set A starts with 100 and ends with 200/starts with 200 and ends with 300) (Set B starts with 1000 and ends with 2000/starts with 2000 and ends with 3000.)

Call on volunteers to plot 142 and 253 on the number lines.
Ask: In which hundred is 142 nearer? (100)
In which hundred is 253 nearer? (300)

Call on volunteers to plot 1942 and 2535 on the number lines.
Ask: In which thousand is 1942 nearer? (2000)
In which thousand is 2535 nearer? (3000)

Tell them that the numbers were rounded to the nearest hundreds and nearest thousands.

Ask other pupils to write the rounded off numbers on the board then add.
Have them come up with the following:
A. \(100 + 300 = 400\)
B. \(2000 + 3000 = 5000\)
Have the pupils compare the actual sum with the estimated sum.

Present other examples:

\[
\begin{array}{c c}
486 & 5425 \\
+ 312 & + 1238
\end{array}
\]

Ask pupils to identify the hundreds or thousands each number is closest.

\[
\begin{array}{c c}
486 & 5425 \\
312 & 1238
\end{array}
\]

Then, recall the rules of rounding numbers using the given numbers. Lead the pupils to find out that the numbers are rounded in their highest/greatest place value.

<table>
<thead>
<tr>
<th>Given Numbers</th>
<th>Rounded Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>486</td>
<td>500</td>
</tr>
<tr>
<td>312</td>
<td>300</td>
</tr>
<tr>
<td>798</td>
<td>800</td>
</tr>
<tr>
<td>Actual Sum</td>
<td>Estimated Sum</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>486</td>
<td>500</td>
</tr>
<tr>
<td>312</td>
<td>300</td>
</tr>
<tr>
<td>798</td>
<td>800</td>
</tr>
<tr>
<td>Actual Sum</td>
<td>Estimated Sum</td>
</tr>
<tr>
<td>5125</td>
<td>5000</td>
</tr>
<tr>
<td>1238</td>
<td>1000</td>
</tr>
<tr>
<td>6363</td>
<td>6000</td>
</tr>
</tbody>
</table>

The estimated sum may either be larger or smaller than the exact sum. The estimated sum is very close to the value of the exact sum.

2. **Performing the Activity**

Perform the activity in pair.

Estimate the sum to the nearest:

- hundreds
- thousands

1) 532 + 526
2) 2345 + 3637

3. **Processing the Skills**

Ask:

1. To what place value was the number 532 rounded? How about 526?
2. To what place value were the numbers in item 2 rounded? Why?
3. What rules in rounding should you remember?
4. What final step did you do to find the estimated sum?

4. **Reinforcing the Concept**
Hold a contest on estimating sums. The first three pupils to give the answers quickly are the winners. Refer to the exercises in Activity 1 in the LM.

Answer Key: 1) 8 500  2) 8 500  3) 4 400  4) 9 000  5) 8 000

5. **Summarizing the Lesson**

What steps do we follow in estimating the sum of 3- to 4-digit addends?

To estimate the sum up to 3- to 4-digit addends, round the numbers to their greatest place value then add the rounded numbers.

6. **Applying to New and Other Situations**

Let pupils find the estimated sum and the actual sum in the exercises under Activity 2 in the LM. Check pupils’ answers.

Answer Key:

<table>
<thead>
<tr>
<th>Estimates</th>
<th>Actual Sum</th>
<th>Good Estimates?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) 2 000</td>
<td>2 179</td>
<td>Yes</td>
</tr>
<tr>
<td>2) 5 700</td>
<td>5 302</td>
<td>Yes</td>
</tr>
<tr>
<td>3) 8 000</td>
<td>8 086</td>
<td>Yes</td>
</tr>
<tr>
<td>4) 4 000</td>
<td>3 830</td>
<td>Yes</td>
</tr>
<tr>
<td>5) 8 000</td>
<td>8 564</td>
<td>No</td>
</tr>
</tbody>
</table>

C. **Evaluation**

Ask pupils to read the situation in Activity 3 of the LM. Have them answer the questions that follow. Let them do this on their papers.

Answer Key: 1) 4 000  2) 2 900  3) 2 800  4) a. 2 800 b. 4 000  5) a. 8 370  b. 7 700 or 8 000

D. **Home Activity**

Ask pupils to work on Activity 4 in the LM at home. Check pupils’ answers.

Answer Key: 1) PhP20 000  2) PhP11 013  3) PhP15 000  4) PhP14 000  5) Store C – PhP9 000

**Lesson 16 Adding 1- to 2-Digit Numbers Mentally without and with Regrouping**

**Week 5**
Objective
Add mentally 1- to 2-digit numbers without or with regrouping using appropriate strategies

Value Focus
Helpfulness and industry

Prerequisite Concepts and Skills
1. Addition basic facts
2. Adding multiples of 10s
3. Place value and value of 2-digit whole numbers
4. Adding 2-digit numbers without and with regrouping

Materials
2- digit numbers and exercises printed in cards, boxes of toys/playthings, 2 boxes of marbles

Instructional Procedures

A. Preliminary Activities

1. Drill
   Game: “Sit Down”
   Ask all pupils to stand near their desks/chairs.
   Flash some domino cards. Pupils give their answers.
   The first pupils to give the correct answer will sit down.

   Flash the cards. Pupils tell the value of the underlined digit.
   3 4 6 7 2 9 3 8 3 7

   Flash these number cards. Pupils state their answers orally.
   30 20 10 50 40
   + 50 + 40 + 70 + 10 + 30

2. Review
Have the pupils solve and write the answer to these exercises using chalkboards or “Show Me” boards.

a. 27 more than 31 is what number? (58)
b. 35 increased by the sum of 6 and 8 is equal to what number? (49)
c. 42 added to 45 is equal to what number? (87)
d. Combine 16 and 51. (67)
e. Write the sum of 84 and 12. (96)

3. Motivation
   Show a box of toys.
   Ask pupil volunteers to pick some toys they like most from the box.
   Have them tell the class their reason for choosing the toy.

B. Developmental Activities

1. Presenting the Lesson
   Tell pupils this story about two brothers.

   Arvin and Nico are brothers. Both received a box of marbles from their father as reward for helping him clean the yard. Arvin counted 24 marbles in his box. Nico counted 35 marbles. How many marbles do they have in all?

   Ask: Who are the brothers?
   Why did their father give them rewards?
   What reward was given to them?
   How many were given to Arvin? to Nico?

   Present the two boxes with marbles to the pupils.
   Call two volunteers to count the marbles in each box.

   Ask: What would you do to find the total number of marbles?
   Lead the pupils to give the answer by putting together and counting all the marbles in the two boxes.
   Have one volunteer write the addition sentence on the board:

   \[ 24 + 35 = n \]
Call on other pupils to write the numbers on the board in column and find the sum. Have other pupils check the answer. See to it that they get 59 marbles as the answer. Have pupils see that the given addends can also be solved mentally using some strategies. Tell them that through these strategies they would be able to perform the addition in their mind.

Write the addition equation again on the board.
\[ 24 + 35 = n \]
Tell pupils that they will be using the front-end addition strategy to be able to add the numbers mentally. Check that the pupils understand what the numbers really mean.

Have the pupils see 3 as 30 and 2 as 20.

Let them follow these steps:

1. Split up each number to its place value.
   \[
   \begin{align*}
   24 & \quad + \quad 35 \\
   (20 + 4) & \quad + \quad (30 + 5)
   \end{align*}
   \]

2. Add the tens, and then add the ones.
   \[
   \begin{align*}
   (20 + 30) & \quad + \quad (4 + 5) \\
   50 & \quad + \quad 9
   \end{align*}
   \]

3. Put together the tens and the ones.
   \[ 50 + 9 = 59 \]

With this strategy, pupils will see that 59 is not a simple number of 5 and 9 but a sum of 50 and 9.

Show them another way of doing this strategy.

Think:

\[
\begin{align*}
24 + 35 & \\
\sqrt{20 + 30} & = 50 \\
\sqrt{4 + 5} & = \frac{9}{59} \\
\sqrt{50 + 9} & = 59
\end{align*}
\]
Try another example. This time, adding numbers mentally with regrouping.

Have them write 46 + 38 on the board.  
Have the pupils see 4 as 40 and 3 as 30.

Let them follow these steps:

\[ 46 + 38 \]
1. Split each number as to its place value.

\[
\begin{align*}
46 & \quad + \quad 38 \\
(40 + 6) & \quad + \quad (30 + 8)
\end{align*}
\]

2. Add the ones.

\[ 6 + 8 = 14 \rightarrow (\text{Think: } 14 = 10 + 4) \]

3. Add the tens and ones.

\[
\begin{align*}
(40 + 30 + 10) + 4 \\
80 & \quad + \quad 4
\end{align*}
\]

4. Put together the tens and ones.

\[ 80 + 4 = 84 \]

2. Performing the Activity  
Have pupils work in pairs.  
Ask them to work with their partners in giving the answers to the exercises in the table like the one shown below.  
Instruct them to use any of the strategies they learned in computing for the answer mentally.

<table>
<thead>
<tr>
<th>Addends</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) 26</td>
<td>42</td>
</tr>
<tr>
<td>2) 14</td>
<td>65</td>
</tr>
<tr>
<td>3) 35</td>
<td>51</td>
</tr>
<tr>
<td>4) 48</td>
<td>37</td>
</tr>
<tr>
<td>5) 63</td>
<td>18</td>
</tr>
</tbody>
</table>

3. Processing the Activity  
Ask: Which digits in item no. 1 are the ones digits? the tens digits?  
Ask the same questions for items 2 to 5.
How were the addends in item no. 1 split as to their place values?
Let the pupils answer the same questions for items 2 to 5.

How would you know that regrouping should be done in order to find the answer?
Which values were added first in item numbers 1, 2, and 3?
Which were added next?
What was done as the last step?
Which values were added first in item numbers 3, 4, and 5?
Why do you think this was done first?
Which were added next?
What was done as the last step?

4. **Reinforcing the Concept**
   Refer pupils to Activity 1 in the LM. Have them give each sum orally.
   Tell them that knowing at once when to regroup is very important and should become automatic. Instruct them to place paper upside down and wait for the signal for them to start answering. Set a timer. Then, give the signal.
   Answer Key: 1) 26 2) 55 3) 64 4) 44 5) 61

   Emphasize the rule of not using paper and pencil computations.

5. **Summarizing the Lesson**
   How do we add mentally?

   Lead the pupils in saying:

   To add 1– to 2-digit numbers mentally:
   - First, split the numbers as tens and ones.
   - Add the tens, and then add the ones.
   - For addends that require regrouping, add the ones first then the tens.
   - As a last step, add the tens and ones.

6. **Applying to New and Other Situations**
   Have pupils work on activity 2 in the LM. Ask the pupils to solve the word problems mentally.
   Answer Key: 1) 40 2) 60 3) 38 4) 39 5) 50

C. **Evaluation**
   Let pupils perform the exercises under Activity 3 in the LM without using paper and pencil. Then have them solve the number sentences in Activity 4. Tell pupils to write their answers on their papers. Evaluate the results.
   Answer Key (Activity 3)
Lesson 17 Adding Mentally 2- to 3-Digit Numbers with Multiples of Hundreds

Week 5

Objective
Add mentally 2- to 3-digit numbers with multiples of hundreds using appropriate strategies

Value Focus
Sharing

Prerequisite Concepts and Skills
1. Basic facts in addition
2. Place value through tens and hundreds
3. Adding multiples of 10

Materials
Story on the chart, numbers on a chart, number cards of 2- and 3-digit numbers

Instructional Procedures

A. Preliminary Activities

1. Drill
Encircle the addends for the following sums. Addends can be 2 or more.

1) 5
2) 9
3) 10
4) 12
5) 15

2. Review
Flash a set of number cards. Have the pupils identify the digits in the tens place. Repeat the same procedure in letting them identify the digits in the hundreds place. Announce the specific place to be identified (tens and hundreds alternately) with the other set of cards.

Let them do these exercises.
Fill in the blanks with the correct number.

1) 30 = ______ tens and ______ ones
2) 50 = ______ tens and ______ ones
3) 70 = ______ tens and ______ ones
4) 100 = ______ tens and ______ ones
5) 400 = ______ tens and ______ ones

3. Motivation
Ask the pupils their birthdays. Talk about their ways of celebrating their birthdays.

B. Developmental Activities

1. Presentation
Present this story problem.

It was Ena’s 8th birthday. Her mother promised to give her a simple treat. She bought 80 pieces of pandan cupcakes and 100 pieces of buko cupcakes. How many cupcakes did she buy in all?

Ask: Who celebrated her birthday?
How old is she now?
Who gave her a treat?
What did mother buy?
How many pieces of pandan cupcakes did mother buy?
How many pieces of buko cupcakes did mother buy?
How many cupcakes did she buy in all?
How would find out the total number of cupcakes mother bought?

Ask volunteers to write the number sentence on the board.
Use the place value chart below in arriving at the answer.
Call on volunteers to plot the numbers on the place value chart.

Lead them to do the following steps:

<table>
<thead>
<tr>
<th>Step 1: Add the ones.</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Sum</strong></td>
<td></td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 2: Add the tens.</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Sum</strong></td>
<td></td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 3: Add the hundreds</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Sum</strong></td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Thus \(100 + 80 + 0 = 180\)

Tell pupils that there is a shorter way of arriving at the answer and this can be done mentally.

Say: Add \(100 + 80\)

Let them recall that \(180 = 10\) tens and \(0\) ones, and \(8\) tens and \(0\) ones. Using the same steps in adding mentally, use the front-end strategy to show them how addition is done mentally.
Let them follow these steps used in the front-end strategy:

Add: 100 + 80

Let them recall that 100 = 10 tens and 0 ones
and 80 = 8 tens and 0 ones

1. Adding the tens: 10 + 8 = 18
2. Annex/write the terminal zero, which means that there are zero ones (since 0 + 0 = 0).
3. Annex/write the terminal zero after 18 → 180
   Therefore, the answer is 180.

In adding 3-digit numbers with multiples of hundreds, let them see these steps:

Add: 400 + 700
1. Add the digits in the hundreds place which are 4 and 7.
   4 + 7 = 11
2. Annex/write the two zeros after the sum. This means that there are 0 tens and 0 ones.
3. Annex/write the 2 terminal zeros → 1,100
   Therefore, the answer is 1,100.

2. Performing the Activity
   Introduce a game for this activity.
   Group pupils. Provide each group with activity cards like these.

   20 + 10 =
   400 + 20 =
   800 + 600 =
   90 + 300 =
   50 + 10 =
   500 + 40 =
   900 + 30 =

   Have them write the answers to the exercises within the shortest time possible. The group to finish first and with the correct answers is the winner.

3. Processing the Activity
   Ask: What step was done first in adding multiples of tens and hundreds? the multiples of tens? the multiples of hundreds? What was done with terminal zero in the addends which are all tens?
What was done with terminal zero in the addends which are
tens and addends?
What was done with terminal zeros in the addends which are all
hundreds?

4. Reinforcing the Concept
Ask the pupils to work on Activity 1 in the LM and find the addends
mentally.
Answer Key: 1) 450 2) 710 3) 890 4) 320 5) 600
6) 370 7) 650 8) 810 9) 440 10) 700

5. Summarizing the Lesson
Ask: How do we add 2-digit and 3-digit numbers with multiples of
tens and hundreds mentally?

In adding without regrouping 2-digit and 3-digit numbers with
multiples of tens and hundreds mentally, first we add the numbers
in the ones place, then the tens and lastly, the hundreds.

6. Applying to New and Other Situations
Have the pupils read each problem and let them give the correct
answer using mental addition.

a. Marion has read 302 pages of the 400 pages of his favorite book.
   Her brother Jay lent him another book which she read at once.
   She finished reading all 128 pages of the book in two days. How
   many pages did she read in all? (430)

b. A 50-seater bus can carry up to 65 passengers both seated
   and standing. Bus A had 60 passengers during its first trip in the
   morning and Bus B had 59. How many passengers did the two
   buses have altogether? (119)

c. In a small hospital, 35 babies were delivered in the first three months
   of the year and 46 during the last three months. How many babies
   were delivered in six months’ time? (81)

C. Evaluation
Ask the pupils to work on the exercises under Activity 2 in the LM. Have
them give the answers orally.
Answer Key: 1) 90 2) 70 3) 90 4) 260 5) 220 6) 330 7) 590 8) 680
9) 900 10) 900

D. Home Activity
Ask your parents’ help in doing the exercises below. If your parents are working, ask how much your mother earns in a month and how much your father earns at the same period. Add mentally the total earnings of your parents.

Lesson 18  Solving Routine Problems involving Addition

Week 6

Objective
Solve routine problems involving addition of whole numbers with sums of 10 000 including money using appropriate problem solving strategies and tools

Value Focus
Awareness on the preservation of the environment

Prerequisite Concepts and Skills
1. Concept of whole numbers
2. Concept of addition
3. Steps in problem solving

Materials
Illustration, problems printed on a chart, flash cards on addition of 2– and 3–digit numbers without or with regrouping

Instructional Procedures
A. Preliminary Activities
   1. Drill
      Use flash cards with addition of 2– and 3–digit numbers without or with regrouping which the pupils can answer orally. Call pupils at random to answer each.
      Add:
      \[
      \begin{array}{c}
      12 + 8 \\
      20 + 12 \\
      32 + 16 \\
      13 + 27 \\
      28 + 24 \\
      \end{array}
      \]
   2. Review
      Present these problems on a chart. Ask pupils what they should do to find the answer. How did they know? Let them give the answer orally.
      a. Cliff picked 23 guavas. Mel picked 19. How many guavas were picked in all?
      What word tells you to add?
b. Romy gathered 240 eggs in their farm last Saturday. He gathered 170 eggs on Sunday. How many eggs was he able to gather in two days?
c. Nicolette was asked to count the books on a shelf. She counted 97 Math books and 40 Science books. How many books were there on the shelf?

3. **Motivation**
   Ask the pupils what plants or trees they have in their school garden.
   Ask further what they do to maintain them.
   Call on volunteers to name some plants which they have planted themselves.
   Talk about the importance of preserving the environment.

---

B. **Developmental Activities**

1. **Presenting the Lesson**
   Present the problem to the class.

   The pupils of two neighboring schools joined the School Greening Project.

   Show this illustration to the pupils.

<table>
<thead>
<tr>
<th>School Greening Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
</tr>
<tr>
<td>_________________________</td>
</tr>
<tr>
<td>San Nicolas Elem. School</td>
</tr>
<tr>
<td>San Roque Elem. School</td>
</tr>
</tbody>
</table>

   Legend:  
   -  = 1 000  
   -  = 100
Ask: How many pupils joined the project?
Which schools were mentioned in the problem?
How many pupils does San Nicolas Elementary have?
How many pupils does San Roque Elementary have?
How will you find the answer? Why?

Let the pupils give the number sentence for the illustration.
Have one pupil solve the problem on the board.

\[
\begin{array}{c}
2123 \\
+ 2645 \\
4768
\end{array}
\]

Ask: How do we know that the answer to the problem is correct or not?
Therefore, \textbf{4 768} pupils joined the project.

2. **Performing the Activity**

Have the pupils work in groups. Provide them with problems like these in activity cards.

A. Draw pictures to represent the problem, then write a number sentence for it and solve.

**Ailing Fely** earned PhP1 115 from her sari-sari store last Saturday and PhP1 035 on Sunday. How much money did she earn in two days?

<table>
<thead>
<tr>
<th>Saturday’s Earnings</th>
<th>Sunday’s Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount ______</td>
<td>Amount ______</td>
</tr>
</tbody>
</table>

**Total**

B. Make a table for this problem.
Answer the questions that follow.

The population of Remelian Elementary School is 4 167 while that of Emarian Elementary School is 4 213. What is the total population of the two schools?
1. What is the school population of Remelian Elementary school?
   the Emarian Elementary School?
2. How are you going to solve the problem? Why?
3. What is the number sentence for the problem?
4. How is the solution done?
5. How do we check the correctness of our answer?
6. What is the correct answer?

Have the group do the reporting.

3. **Processing the Activity**
   Ask: How will you solve a problem? (Look for word clues.)
   What should you find out? (What is needed in the problem, the
   given facts, operation to use, number sentence)
   How did you check the correctness of your answer?

4. **Reinforcing the Concept**
   Have the pupils to solve the problems under Activity 1 in the LM.
   Remind them on how to solve problems.
   Answer Key: 1) 2 046 pupils 2) 7 163 mangoes 3) PhP8 700.00

5. **Summarizing the Lesson**
   How can you solve a problem?

   In solving problems, follow Polya’s 4-step Procedure:
   1. Understand the problem.
   2. Plan. Determine the process to be used to solve the problem.
   3. Carry out the plan.
   4. Check or look back.

6. **Applying to New and Other Situations**
   Have the pupils analyze and solve the problems under Activity 2 in the
   LM. Tell them to write their answers on their papers.
   Answer Key: 1) 3 582 pineapples 2) 6 211 coconuts

**C. Evaluation**
Let pupils write a number sentence for each problem in Activity 3 and
Activity 4 in the LM.

Answer Key: (Activity 3) Answer Key: (Activity 4)
1) PhP275 1) 3 016 tickets
2) 6 876 eggs 2) PhP 8 074.00
D. **Home Activity**

Ask pupils to copy the problems in Activity 5 and Activity 6 in their notebooks. Let them analyze and solve the problems.

**Answer Key:**

**Activity 5:**

1) 900
2) 1 250
3) 50
4) a. 62 marbles, b. green marbles
5) 72 slices, 63 pupils. Yes, because there are 9 slices more than the number of pupils.

**Activity 6:**

1) 500 straws
2) 580 bottle caps

---

**Lesson 19 Solving Non-Routine Problems involving Addition**

**Week 6**

**Objective**

Solve non-routine problems involving addition of whole numbers with sums of 10,000 including money using appropriate problem solving strategies and tools.

**Value Focus**

Courtesy, Politeness

**Prerequisite Concepts and Skills**

Solving one-step problems involving addition

**Materials**

Word problems printed on a chart

**Instructional Procedures**

A. **Preliminary Activities**

1. **Drill**

   If the number sentence is true, raise your right hand, if it is false, raise your left hand.
1. \[8 + 6 = 12\]
2. \[13 + 14 = 27\]
3. \[15 + 32 = 36\]
4. \[18 + 13 = 31\]
5. \[48 + 12 = 60\]

2. **Review**
   Read and analyze the problem.
   
   Maria picked 12 red roses and 10 white roses in her rose garden. How many roses were picked in all?
   
   Ask: What is the problem all about?
   What will you do to find the answer to the problem?
   What are the needed given data?
   What will you do check if your answer is correct?

3. **Motivation**
   Let the pupils read the dialog.
   
   Storyteller: One morning, Elmer went to an eatery to have his snack. Mrs. Flores owned the place.
   Elmer: Good morning, Mrs. Flores.
   Mrs. Flores: Good morning. What can I do for you?
   Elmer: I would like to order food for snack.
   Mrs. Flores: What do you want?
   Elmer: I want a sandwich and fruit juice.
   Mrs. Flores: Here they are.
   Elmer: Thank you, Ma’am.
   Mrs. Flores: You’re welcome.
   
   Ask: What can you say about Elmer?
   What kind of boy is he? Why do you say so?

B. **Developmental Activities**

1. **Presenting the Lesson**

   **MENU**

<table>
<thead>
<tr>
<th>Snacks</th>
<th>Meals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandwich</td>
<td>Fried fish and rice</td>
</tr>
<tr>
<td>Banana cue</td>
<td>Chopsuey and rice</td>
</tr>
<tr>
<td>Crackers</td>
<td>Fried chicken and rice</td>
</tr>
<tr>
<td>PhP15.00</td>
<td>PhP35.00</td>
</tr>
<tr>
<td>PhP8.00</td>
<td>PhP35.00</td>
</tr>
<tr>
<td>PhP5.00</td>
<td>PhP40.00</td>
</tr>
</tbody>
</table>
**Talk about the food ordered by Elmer.**

Ask: How much is the cost of a sandwich? fruit juice?
How much did Elmer spend for his snacks?

Use the given list of food in the eatery in solving the following problems:

1. Kobe has PhP25.00 for snacks. What can he order with this amount?

   Ask the pupils to compute the total amount of each set of food ordered.
   Possible answers:

   | sandwich       | PhP15 | banana cue | PhP 8.00 |
   | fruit juice    | PhP12.00 | crackers | PhP 5.00 |
   |                | PhP25   | fruit juice | PhP12.00 |
   |                |         |            | PhP25.00 |

   Use the same procedure for question numbers 2 and 3.

2. If you have PhP20.00 for snacks, what will you buy?

   Possible answers:

   | banana cue | PhP 8.00 | banana cue | PhP 8.00 |
   | fruit juice | PhP12.00 | crackers | PhP 5.00 |
   |             | PhP20.00 | bottled water | PhP 8.00 |
   |             |         | PhP 21.00 |

3. It is lunchtime. What meal will you order if you have PhP50?

   Possible answers:

   | fried fish and rice | PhP 35.00 | chopsuey and rice | PhP 35.00 |
   | banana | PhP 5.00 | banana | PhP 5.00 |
   | gulaman | PhP 10.00 | gulaman | PhP 10.00 |
   |             | PhP 50.00 |             | PhP 50.00 |

   | chicken and rice | PhP 40.00 | beef caldereta and rice | PhP 45.00 |
   | gulaman | PhP 10.00 | banana | PhP 5.00 |
   |             | PhP 50.00 |             | PhP 50.00 |

2. **Performing the Activity**
Have the pupils work in groups of four. Tell them they will play with needed data to solve problems in this activity. They have to give the answer snappily to win the game. Provide strips of cartolina or any available paper where answers are to be written.

a. Marlon was given 15 blue marbles and 20 red marbles. How many marbles does Marlon have in all?

1) Process to be used
2) Mathematical sentence
3) Data asked for
4) Answer to the problem
5) Given data

b. If you add 234 to 122, what is the sum?

1) Needed data
2) Process to be used
3) Word clue
4) Mathematical sentence

Ask the pupils to present their work. Check them.

3. Processing the Activity
How did you solve the problem?
What did you do to solve it?
What process did you use?

4. Reinforcing the Concept
Ask pupils to find out if the sums of the numbers in any row, column or diagonal is always the same. Let them do Activity 1 on their papers. Answer Key: 1) 31   2) 96   3) 118

5. Summarizing the Lesson
How did you solve the problem?
What helped you solve it?

6. Applying to New and Other Situations
Divide the class into five groups. Refer them to Activity 2 in the LM. Tell them to arrange the scrambled digits in the star in the circles to make addition sentences. Tell them to use the sums as guide. Answer Key: 1) 837 + 245   2) 967 + 384   3) 879 + 325
4) 7 974 + 1 356   5) 5 493 + 2 618

Marlon was given 15 blue marbles and 20 red marbles. How many marbles does Marlon have in all?

If you add 234 to 122, what is the sum?

If you add 234 to 122, what is the sum?
C. Evaluation
Ask the pupils to answer the questions under Activity 3 in the LM. Tell pupils to do these on their papers.
Answer Key: 1) 25 and 26  2) 31, 32 and 33

D. Home Activity
Refer pupils to Activity 4 in the LM. Let them form 3-digit numbers from the numbers in the box that will give the least sum and the greatest sum. Have them do these in their notebooks.
Answer Key:

2) 123 + 654 = 136 + 245 = 381 or 246 = 381
631 + 542 = 1173 or 642 + 531 = 1173

3) 543 + 768 = 825 or 546 + 357 = 825
853 + 764 = 1617 or 864 + 753 = 1617

Lesson 20 Creating Problems involving Addition

Week 6

Objective
Create problems involving addition of whole numbers including money with reasonable answers

Value Focus
Cooperation, Unity, Sportsmanship

Prerequisite Concepts and Skills
1. Basic addition facts
2. Concept of addition and its operation
3. Estimating sums
4. Steps in solving problems

Materials
Flash cards, charts, activity charts, 3 sets of tangram puzzle

Instructional Procedures

A. Preliminary Activity

1. Drill
Give the pupils a drill on basic addition facts. Use flash cards like:

\[
\begin{array}{ccccccccc}
8 & +6 & 14 & +8 & 7 & +9 & 5 & +4 & 24 & +6 & 21 & +11 & 15 & +23 & 13 & +6 & 4 & +8 & 3 & +7 \\
\end{array}
\]

2. Review
Have a review on how to analyze and solve word problems. Ask the pupils the steps in analyzing and solving problems. Let them also recall the different ways of solving word problems.

3. Motivation
Divide the class into three groups. Distribute puzzle pieces to each group. There are questions and answers written in the puzzle. Pupils will put the pieces together by connecting the answer to the question to form a square. The first group to form a square wins.

Ask: Who won the game?
Why do you think they won?
What qualities did you observe in their group?
What about the group which did not win?
How do you feel? What will your group do next time?

B. Developmental Activities

1. Presenting the Lesson
Present the illustration below:

Ask: Can you make a short story out of the pictures?

Give ample time for the pupils to collect their thoughts and form a short story.

Call some pupils and ask them to share their stories. Let each of them read the story he/she created. (Accept all possible stories the pupils created.)
Ask them why they made such stories. Also ask what clues in the picture helped them make their story.

Pose a challenge: If I ask you to make a word problem using the pictures, will you be able to make one? (Let the pupils make a problem story and report their work to the class.)

Ask: Are the pictures enough to make a word problem? Can you explain why?

What things/data would you need to see so that you can create a word problem?

2. Performing the Activity

Give an example of a word problem.

Ms. Cruz’s class collected empty plastic bottles as their project in Science. On the first week they collected 122 empty plastic bottles, and on the second week they collected 115. How many bottles did they collect in two weeks?

Ask: Is the problem a complete one? How do you know? What things are needed to have a complete word problem? Can you identify the things needed to make a complete word problem?

The teacher will make markings on the problem to emphasize the data needed to form a problem.

Ask pupils how they will know the operation to use to solve the problem, how they solve it and what the solution will be. Call one pupil to do it on the board.

Possible answer:
Operation: Addition
Number sentence: $122 + 105 = n$
Solution: $122 + 105 = 225$
Complete answer: 225 empty plastic bottles were collected in two weeks.

Say: Now let us try to create a word problem.

Divide the class into three groups. Let them choose a leader and a secretary. Ask the groups to use the given data below. Then let each group post their work on the board. The leader will report to the class about the word problem they have created and the solution and answer to it.

- Chicken sandwich – PhP15.00
- Orange Juice – PhP10.00
- Amount spent in all?

Give the pupils another set of data for them to create a word problem individually. Let the pupil who created the most appropriate word problem write his/her problem on the board and its corresponding solution and answer. Give him/her recognition for the work well done.

3. Processing the Activity
   Ask: What things/data are needed so that you can create a word problem?
   How will you check if the answer to the problem you have created is correct?
   What are the things you should remember when creating a word problem?

4. Reinforcing the Concept
   Group Activity

Divide the class into five groups. Let them choose a leader and a secretary. Give each group an activity card with data to be used in creating a problem. Then let each group post their work on the board. The leader will report to the class the word problem they have created and the solution and answer to it.

Activity Card 1

- Monday’s Savings – PhP5.00
- Tuesday’s Savings – PhP3.00
- Wednesday’s Savings – PhP3.00
- Thursday’s Savings – PhP2.00
- Fridays’ Savings – PhP4.00
- Total Savings?
Pair Activity

Tell pupils to find a partner. Have the pairs answer Activity 1 in the LM. Check pupils’ answers.

Answer Key:
1) 112 pages and 98 pages
2) 25 Philippine stamps and 15 foreign stamps
3) PhP150.00 and PhP35.00
4) 25 boys and 30 girls
5) 205 words and 212 words

Individual Activity
Have the pupils answer Activity 2 of LM individually. Check pupils’ work.

Answer Key:
1) How many pupils joined the Peace Parade activity?
   \[345 + 412 = 757\] pupils
2) How many kilograms of vegetables were sold in all?
   \[32 + 25 + 28 + 38 = 123\] kg of vegetables
3) How many caimitos do the two boys have altogether?
   \[120 + 203 = 323\] caimitos
4) How many pages of the pocketbook did he read in all?
   \[123 + 118 = 241\] pages

5. Summarizing the Lesson
   How do we create word problems?
   What are the things needed to formulate a problem?

To create word problem, you need the following:

- data or numbers
- word clues/operation
- the questions asked or needed to be answered

How will you check if the answer to the problem you have created and solved is correct?

- To check if the problem created is correct, all the given data that are needed to solve the problem should be there.
- To check if the solution to the created problem is correct, the answer must be the one that answers what is asked for.

6. Applying to New and Other Situations
   a. Group Activity

Divide the class into 2 groups. Give each group some data for them to make a problem. Let each group write their answer on a 1/2 manila paper and post their answer on the board. Have one pupil from each group report on their work.

<table>
<thead>
<tr>
<th>Group 1</th>
<th>Group 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of mango trees – 54</td>
<td>2 mangoes for PhP25.00</td>
</tr>
<tr>
<td>No. of santol trees – 27</td>
<td>1 melon for PhP30.00</td>
</tr>
<tr>
<td>Total number of trees?</td>
<td>Total amount spent?</td>
</tr>
</tbody>
</table>
Have the pupils individually answer Activity 3 in the LM.

Answer Key:
1) There were 27 tomato seedlings and 38 eggplant seedlings in a nursery. How many seedlings are there in all? (27 + 38 = 65 seedlings)
2) In a school foundation day celebration, there were 236 men and 324 women joined the parade. How many joined the parade? (236 + 324 = 560)
3) Leomar has 48 marbles. Kim has 36 marbles. How many marbles do they have in all? (48 + 36 = 84)

C. Evaluation
Have pupils work on Activity 4 of the LM. Check their answers.

Answer Key:
1) There were 223 rattan chairs and 247 wooden chairs in the social hall. How chairs were there in all? (223 + 247 = 470)
2) There were 70 jackfruit seedlings and 110 camias seedlings in the nursery. How many seedlings were there in all? (70 + 110 = 180)
3) Kenneth painted 24 flower pots. Ben painted 18 flower pots. How many flower pots did they paint in all? (24 + 18 = 42)

D. Home Activity
Ask pupils to work on Activity 5 in the LM at home. Check their answers.

Answer Key:
1) In a school fair, the Grade 3 pupils sold 128 tickets and the Grade 4 pupils sold 119 tickets. How many tickets did the pupils sell? (128 + 119 = 247)
2) The Grade 3 and Grade 4 pupils collected 312 and 428 plastic bottles for their Science Club recycling project. How many plastic bottles did the pupils collect? (312 + 428 = 740)
3) Pupils to create their own problems.

Lesson 21 Subtracting Numbers without Regrouping

Week 7

Objective
Subtract 3- to 4-digit numbers from 3- to 4-digit numbers without regrouping

Value Focus