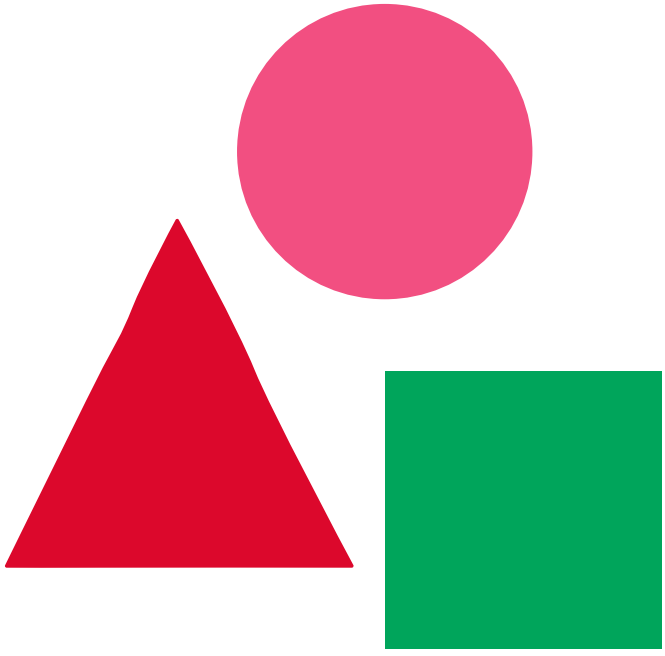
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BAGONG PILIPINAS

MATHEMATICS
TERM 1

Structured Pedagogy Lesson Guides



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Mathematics – Grade 2
Structured Pedagogy
Term 1
First Edition, 2026

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Published by the Department of Education
Secretary: Sonny M. Angara
Undersecretary: Carmela C. Oracion

Development Team: Learning Systems Strand

Printed in the Philippines by _____

Department of Education – Bureau of Learning Resources (DepEd-BLR)

Office Address: Ground Floor, Bonifacio Building, DepEd Complex Meralco Avenue, Pasig City, Philippines 1600
Telefax: (02) 8634-1054; 8634-1072; 8631-4985
E-mail Address: blr.lrqad@deped.gov.ph; blr.lrpd@deped.gov.ph; blr.od@deped.gov.ph

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Mathematics

Term 1

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Term 1

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Term 1
Lesson 1:

Measurement and Geometry
Represent and describe circles, half circles and quarter circles.

I. Learning Objectives
At the end of the lesson, the learners must be able to:

1. represent circles, half circles, and quarter circles; and
2. describe circles, half circles, and quarter circles.

II. Development of the Lesson

A. Motivation

Play the game "I Spy the Shape" with the learners.

- Think of one object that you can see in the classroom. You may use objects in the shape of a circle, triangle, square, or rectangle. For example, the object is a round clock.
- Say "I spy something in the shape of a circle."
- Ask the learners to guess what the object is.
- After the learners have guessed the object, draw its shape on the board.
- Ask the learners to describe the shape according to its number of sides and corners.
- Have the learners try playing the "I Spy the Shape" game one at a time.
- Repeat the activity as needed.

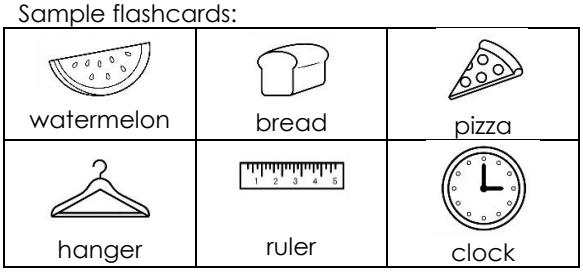
B. Discussion

1. Explain to the class that the lesson will focus on the shape called the circle.
2. Prepare cutouts of a circle and distribute them to the learners.
3. Draw a circle on the board. Ask the learners to copy the circle in their notebooks.
4. Ask the learners how many sides and corners the circle has.
5. Ask the learners to fold the circle cutout in half.
6. Ask the learners to describe the shape they created.
7. Explain that they created a half-circle or a semi-circle. It is exactly one half of an entire circle. Two half-circles of the same size, when combined, create a whole circle.
8. Ask the learners to fold the half-circle cutout in half.
9. Ask the learners to describe the shape they created.
10. Explain that they created a quarter-circle. It is half of a half-circle and exactly one-fourth of an entire circle. Two quarter circles of the same size, when combined, create a half-circle, while four quarter circles make a whole circle.

C. Practice

1. Prepare flashcards of everyday objects. Make sure that the objects have the shape of a circle, half-circle, quarter-circle, triangle, square, or rectangle.

Sample flashcards:



2. Present one object flashcard at a time.
3. Ask the learners to identify the shape of the object presented.
4. After identifying the shape, have the learners draw the shape on the board.
5. Explain what the object is and what shape it is.
6. Repeat the activity as needed.

D. Reflection

Ask the learners the following questions:

- What did we learn today?
- What are the shapes of the objects I see every day?

III. Homework

Ask the learners to look around their home or in school for objects with different shapes. Have the learners copy and complete the table below.

Object	Name	Shape	Number of sides	Number of corners
		Circle		
		Half-circle		
		Quarter-circle		
		Triangle		
		Square		
		Rectangle		

Term 1 **Measurement and Geometry**

Lesson 2: Compose and decompose composite figures made up of squares, rectangles, triangles, circles, half circles, and quarter circles, using cut-outs and square grids.

I. Learning Objectives

At the end of the lesson, the learners must be able to:

1. compose composite figures; and
2. decompose composite figures.

II. Development of the Lesson

A. Motivation

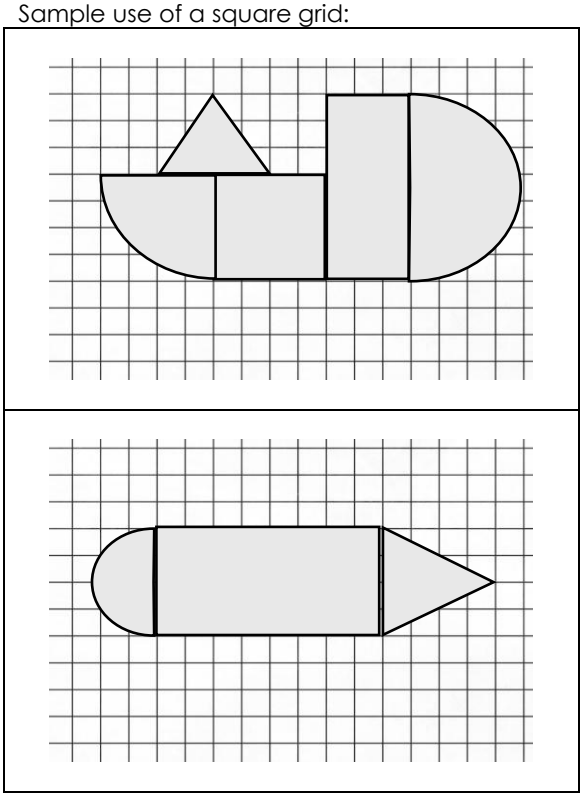
Play "Guess the Shapes" with the learners.

- Prepare cutouts of different shapes and sizes. Use the shapes of a circle, half-circle, quarter-circle, triangle, square, and rectangle.
- Stick all the cutouts on the board. Make sure that the learners can see the cutouts clearly.
- Choose one learner at a time to do the activity. The other learners close their eyes and do not look at the board.
- Ask the learners to choose 2 different shapes. Have them combine both shapes to form a composite figure.
- Draw the outline of the shapes on the board and remove the cutouts. Only the outline of the composite shape should be on the board.
- Ask the learners to identify which shapes were used to make the composite shape.
- Afterward, ask the learners to explain how they created the composite shape.
- Repeat the activity as needed.

B. Discussion

1. Explain to the learners what composing shapes is.
   - To compose is to combine 2 or more shapes to make 1 composite shape.
   - The shapes used do not overlap and are connected at more than 1 point.
2. Explain to the learners what decomposing shapes is.
   - To decompose is to break a shape into 2 or more parts.
3. Explain how a square grid helps to identify shapes.
   - The square grid helps break down composite shapes into simpler, identifiable shapes like squares, rectangles, triangles, circles, half-circles, and quarter-circles.

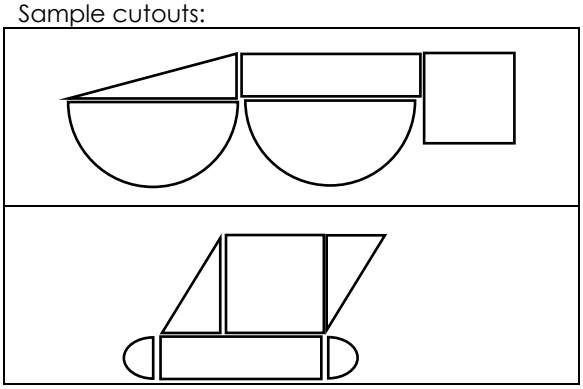
Sample use of a square grid:



C. Practice

1. Prepare cutouts of composite shapes.

Sample cutouts:



2. Give each learner a cutout.
3. Ask the learners to decompose the shape by cutting the cutout using scissors.

4. Afterward, have the learners present how they decomposed the cutout and what shapes were created from decomposing.
5. Check and explain whether the learners did the activity correctly.
6. Present the possible ways to decompose the composite shapes and what shapes are created by their decomposition.
7. Repeat the activity as needed.

D. Reflection

Ask the learners the following questions:

- What did we learn today?
- How many times can you decompose a shape?

III. Homework

Ask the learners to draw a composite shape in their notebook. Have the learners identify what shapes were used to create the composite shape. Ask the learners to look around their home or in school for objects with unique, composite shapes. Have the learners copy the shape in their notebook and decompose it into shapes of squares, rectangles, triangles, circles, half-circles, and quarter-circles.

Term 1 **Measurement and Geometry**

Lesson 3: Describe and draw the effect of one-direction multi-step slide (or translation) in basic shapes and figures.

I. Learning Objectives

At the end of the lesson, the learners must be able to:

1. describe translations in basic shapes and figures; and
2. draw translations in basic shapes and figures.

II. Development of the Lesson

A. Motivation

Play the "Dice Race" game with the learners.

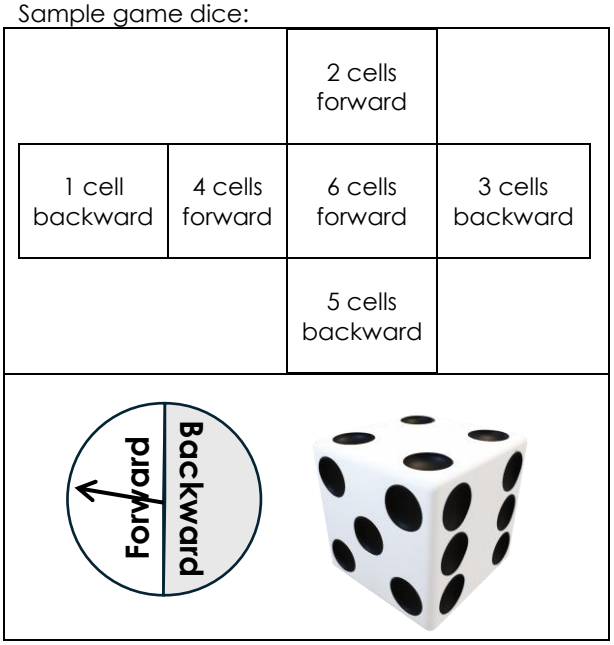
- Prepare the game board. Indicate the start and finish line on the board. Put some distance between the start and finish lines and divide it into cells. Make sure that the cells can fit the cutouts. Do this in two columns.

Dice Race game board:

FINISH	FINISH
START	START

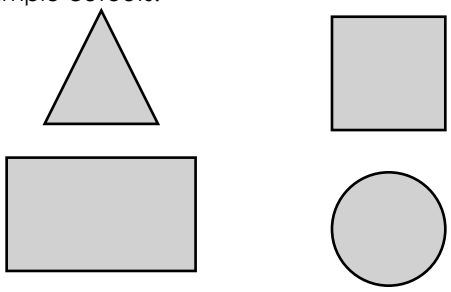
- Prepare the game dice. Create a die with instructions to move forward or backward a number of steps. Alternatively, you can use a standard die, a spinner, or cards indicating the number of steps to move forward or backward.

Sample game dice:



- Prepare the characters or pieces. These can be cutouts of simple shapes like squares, triangles, rectangles, circles, half-circles, and quarter-circles.

Sample cutouts:



- To start the game, divide the learners into teams. Assign each team a cutout.

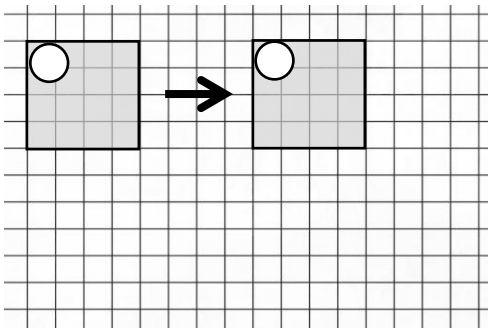
- Place the cutouts on the start cell of the board. Two teams compete against each other on the board at a time.
- Each team will have one representative at a time. The representatives decide which team goes first.
- The representative of the first team rolls the dice.
- After the dice has been rolled, the representative moves their cutout up or down the game board according to the instructions on the dice. The cutout cannot go past the start and finish lines.
- After the turn of the first team, the representative of the second team follows the previous steps.
- After both teams have taken their turns, the representative of each team changes.
- Repeat the steps until a team has reached the finish line. Congratulate the teams and have another pair of teams play the game.
- Repeat until all learners and teams have played.

B. Discussion

1. Explain to the learners what translations are.
   - A translation is sliding a shape while keeping its orientation.
   - A translation involves a direction and a number of units or cells to move to.
   - You may use a grid to illustrate examples of translating shapes.

Sample translation:

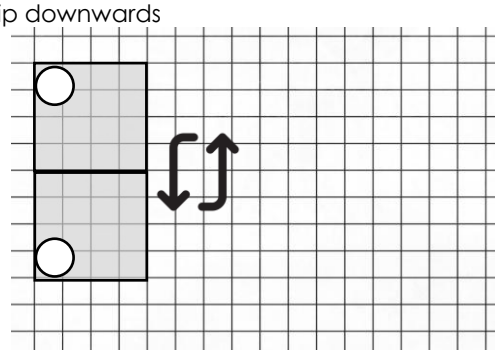
8 units to the right



2. Explain to the learners what a flip is.
   - A flip is turning the shape over in a direction to create a mirror image.
   - You may use a grid to illustrate examples of flipping shapes.

Sample flip:

Flip downwards

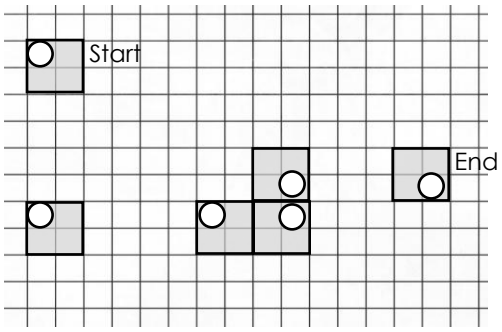


C. Practice

Play the "Translation and Flipping" activity with the learners.

- Group the learners into teams.
- Prepare a grid where the learners can write on.
- Prepare cutouts of shapes with a smaller shape in one of the corners.
- Each group will be given 1 shape cutout and 1 grid.
- Ask the groups to put the cutout anywhere on the grid and indicate its starting position.
- Ask both groups to translate or flip their shape 5 times. Have the groups draw the steps on their grid. Let the group indicate its ending position.
- Let the group take note of the steps done in translation and flipping. Make sure that the other team cannot see the steps being performed by the opposing team.
- Give the learners some time to draw all the steps on the grid and take note of the steps.
- After, exchange the grids of each team.
- The opposite team guesses the steps done by the other team and vice versa.
- Repeat the activity as needed.

Sample completed grid:



Answer key: 6 units downward, 6 units to the right, flip on the right, flip upwards, 5 units to the right.

D. Reflection

Ask the learners the following questions:

- What did we learn today?
- Can you translate and flip shapes?
- Can you figure out how the shape is translated?

III. Homework

Ask the learners to draw an 11x11 grid in their notebook. Have the learners draw a shape of their choosing from square, triangle, rectangle, circle, half-circle, and quarter-circle. Let them add a smaller shape in one of the corners of the shape. Have the learners draw it in the middle of the grid. Prepare a few instructions about translation and flipping shapes for the learners to follow at home. Ask the learners to follow the instructions and draw each step on the grid in their notebook.

Term 1 **Number and Algebra**
Lesson 4: Count up to 1 000.

I. Learning Objectives

At the end of the lesson, the learners must be able to:

1. count up to 1 000.

II. Development of the Lesson

A. Motivation

Play "Math Tic-Tac-Toe" with the learners.

- Prepare Tic-Tac-Toe sheets. These are 3x3 grids. Put a number in each cell in sequence.

Sample Math Tic-Tac-Toe sheet:

1	2	3
4	5	6
7	8	9

- Pair each learner with another learner.
- To start, each learner decides who goes first and picks one symbol, either "X" or "O."
- To place a symbol on the grid, the learner must say the number on the cell.
- After the first learner places their symbol in the cell, the other learner continues with their turn and repeats the process.
- The learner who gets 3 in a row, column, or diagonal wins.
- It is a draw if all the cells get filled and there are no symbols that form 3 in a row, column, or diagonal.
- Repeat the game as needed.

B. Discussion

1. Recall that counting means saying numbers in order, one after another, without skipping (unless we are skip counting on purpose).

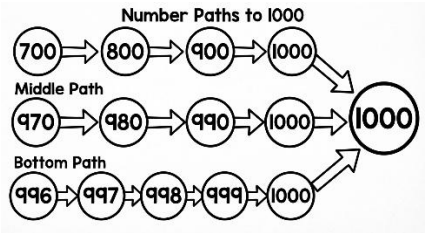
2. Explain that counting to 1,000 can be done in different ways, depending on how big the "jumps" are: by ones, by tens, or by hundreds. Present the step-by-step pattern for each:
   Counting by ones:
   - Step 1: Start at any number (e.g., 195).
   - Step 2: Add 1 to get the next number: 196, 197, 198, 199...
   - Step 3: Watch closely when the ones digit reaches 9 − the next number changes the tens digit too: 199 → 200.
   - Step 4: Continue the same way past every hundred: 299 → 300, 399 → 400, and so on, until 999 → 1,000.

3. Point out that 199 → 200 and 999 → 1,000 are the trickiest jumps in counting, because more than one digit changes at once. Model counting slowly through both of these out loud with the class: "...197, 198, 199, 200, 201..." and "...997, 998, 999, 1,000."
   Counting by tens:
   - Step 1: Start at a multiple of 10 (e.g., 120).
   - Step 2: Add 10 each time — only the tens (and sometimes hundreds) digit changes: 130, 140, 150...
   - Step 3: Notice the pattern: the ones digit always stays the same (0) as you count by tens.

   Counting by hundreds:
   - Step 1: Start at a multiple of 100 (e.g., 300).

- Step 2: Add 100 each time — only the hundreds digit changes: 400, 500, 600...
- Step 3: Notice the pattern: the tens and ones digits always stay the same (00) as you count by hundreds.

4. Model a complete example connecting all three: "Let's count from 700 to 1 000 by hundreds: 700, 800, 900, 1,000. Now let's count from 970 to 1 000 by tens: 970, 980, 990, 1 000. Now let's count from 996 to 1 000 by ones: 996, 997, 998, 999, 1 000."



5. Invite the whole class to count together from 1 to 1 000 by tens (a quicker way to reach 1,000 together as a group), pausing to let volunteers take over every 100.

C. Practice

Play "Battleship" with the learners.

- Prepare 10x10 grids with 2 of each copy. One will be for the ocean of the team, and the other will be for targeting the other team. Use numbers 1-100 for the first grid, 101-200 for the second, and so on. Put a number in each cell in sequence.

Sample grid:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

- Prepare cutouts of battleships to be used for the game. There should be a 1x5, 1x4, 1x3, 1x3, and a 1x2 ship.
- To start, each team gets one ocean grid, one targeting grid which has the coordinates of the opposite team, and 5 ships.
- Each team places their ships either horizontally or vertically on the ocean grid. The ships cannot overlap, be placed diagonally, or go off the grid. Make sure that each team cannot see the board of the opposite team.

Sample completed ocean grid:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Sample targeting grid:

101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200

- Once both teams are ready, choose which team will go first.
- To start the turn, the team picks a number from their targeting grid.
- The opposite team responds with "hit" if there is a ship placed on the number, and "miss" if there is no ship.
- Both teams mark the number on the grid with a cross. Then the other team repeats the steps.
- When all of the grids that the ship is in are marked, the ship sinks. The team whose ship has sunk says "sink."
- The team that sinks all the ships of the opposite team wins.
- Repeat the game as needed.

D. Reflection

Ask the learners the following questions:

- What did we learn today?
- Can you count to 1000?

III. Homework

Ask the learners to copy the chart below in their notebooks. Ask the learners to fill in the missing cells.

1)	1			4	5
2)	49		51		53
3)	191	192			195
4)	598			601	602
5)			998	999	

I. Learning Objectives
At the end of the lesson, the learners must be able to:

1. read and write numbers up to 1 000.

II. Development of the Lesson

A. Motivation

Play the "Matching Numbers" game with the learners.

- Prepare flashcards with numbers and their word forms.

Sample flashcards:

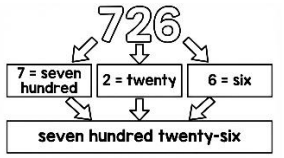
forty	40
nine hundred ninety-nine	999

- Shuffle the flashcards and place them on a flat surface. Make sure that the learners can see all the flashcards.
- Ask the learners to pair the numbers with their word forms.
- Once a learner has found a pair, show it to the learners. Read the number and its word form and ask the learners to repeat after you.
- Explain the spelling and pronunciation of the number and its word form.
- Repeat the activity as needed.

B. Discussion

1. Recall the place values learners will work with up to 1,000: ones, tens, and hundreds (and 1,000 itself as a special number with its own name, "one thousand").

2. Explain how to read a numeral (say it correctly) by first breaking it down by place value. Present the step-by-step procedure using present the numeral present the number templates: Reading and writing a numeral in words, using 726 as the example:
   - Step 1: Identify the place value of each digit: 7 = hundreds, 2 = tens, 6 = ones.
   - Step 2: Say (or write) the hundreds digit first, with the word "hundred": seven hundred.
   - Step 3: Say (or write) the tens and ones digits together, the same way we normally say a 2-digit number: twenty-six.
   - Step 4: Put the parts together in order, left to right: seven hundred twenty-six.



3. Model 2–3 more examples the same way:
   - 350 → three hundred fifty
   - 108 → one hundred eight (no "tens word" needed when the tens digit is 0)
   - 1 000 → one thousand
4. Explain how to go the other way — writing words as a numeral — using "four hundred fifty-three" as the example:
   - Step 1: Find the hundreds word (the word right before "hundred") and write that digit first: four → 4 _ _
   - Step 2: Find the word for the tens and ones part (the part after "hundred") and write it as a 2-digit number: fifty-three → 53
   - Step 3: Combine the digits in order, left to right: 453.
5. Model 2 more examples the same way:
   - three hundred seven → 307 (remind learners that "seven" alone, with no tens word, means 0 in the tens place)
   - one thousand → 1 000

C. Practice

Play the "Guess the Number" game with the learners.

- Prepare numbers either in number form or in word form.
- One at a time, write down a number on the board.
- For numbers in number form, write blanks according to how many digits the number has.
- For numbers in word form, write the word form of the number but with a few letters as blanks.

Sample numbers:

Number form	Word form
_____ _____ _____	s__ve__ __un__r__d __ort__-o__e
_____ _____ _____	si__ h__nd__ed s__x__y-__e__en
_____ _____	__if__y-n__n__

- Ask the learners to guess which number is written on the board.
- After guessing the number, explain the spelling and pronunciation of the number and its word form.
- Repeat the activity as needed.

D. Reflection

Ask the learners the following questions:

- What did we learn today?
- Can you read and write any number?

III. Homework

Ask the learners to pick 5 different numbers from 1 to 1 000. Have the learners write the numbers in their notebooks. Then, ask the learners to write the word forms of the numbers.

Term 1 **Number and Algebra**

Lesson 6: Recognize and represent numbers up to 1 000 using a variety of concrete and pictorial models, and numerals.

I. Learning Objectives

At the end of the lesson, the learners must be able to:

1. recognize and represent numbers up to 1 000.

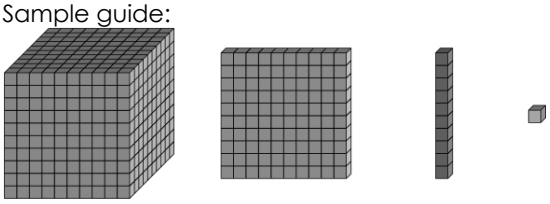
II. Development of the Lesson

A. Motivation

Play "Count the Blocks" with the learners.

- Prepare numbers and their corresponding representations using blocks.

Sample guide:



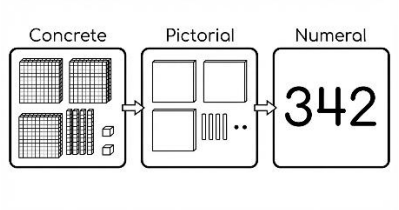
- Present the block representation on the board.
- Ask the learners to count how many blocks there are and what number it corresponds to.
- After the learners have identified the number, explain that each block corresponds to one count.
- You may show the guide above to help the learners with counting the blocks. Explain that the blocks can be grouped into units, longs, flats, and blocks. A unit is 1 count, a long is 10 units, a flat is 10 longs, and a block is 10 flats.
- Repeat the activity as needed.

B. Discussion

1. Recall that a number can be shown in three different ways: **concrete** (using real, touchable objects), **pictorial** (using drawings or pictures), and **numeral** (using digits). Explain that all three ways represent the exact same number — they just look different.
2. Recall the base-ten blocks used in the earlier lesson: a unit = 1 (ones), a rod = 10 (tens), and a flat = 100 (hundreds).
3. Present the step-by-step procedure for representing a number using concrete objects, using 342 as the example:
   - Step 1: Break the number apart by place value: 3 hundreds, 4 tens, 2 ones.
   - Step 2: Show 3 flats (hundreds blocks) for the hundreds place.
   - Step 3: Show 4 rods (tens blocks) for the tens place.
   - Step 4: Show 2 units (ones blocks) for the ones place.
   - Step 5: Count all the blocks together by place value to confirm they represent 342.
4. Explain that when blocks are not available, we can use other concrete objects to represent the same place values, as long as we agree on what each item stands for — for example, bottle caps for ones, sticks of 10 tied together for tens, and small boxes of 100 for hundreds.
5. Present the step-by-step procedure for representing the same number pictorially (through drawings), still using 342:
   - Step 1: Break the number apart by place value, the same as with blocks: 3 hundreds, 4 tens, 2 ones.
   - Step 2: Draw 3 large squares to stand for the hundreds.

- Step 3: Draw 4 lines or rectangles to stand for the tens.
- Step 4: Draw 2 small dots or circles to stand for the ones.
- Step 5: Count the drawings by place value to confirm they still represent 342.

6. Point out that the pictorial model uses the same place value groupings as the concrete blocks - only the material changed, from real objects to drawings on paper.



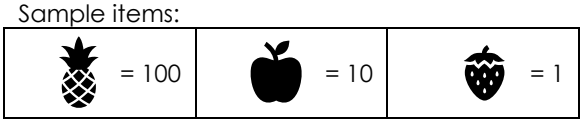
7. Present the final step: writing the numeral. Since we already grouped the number as 3 hundreds, 4 tens, and 2 ones in both the concrete and pictorial models, write the digits in the same order, left to right: 342.
8. Model 1–2 more complete examples, showing a number in all three forms in sequence (e.g., 507 — pointing out that a place with 0 blocks means no blocks or drawings are shown for that place, but the digit 0 must still be written in the numeral).

C. Practice

Play the "Codes" activity with the learners.

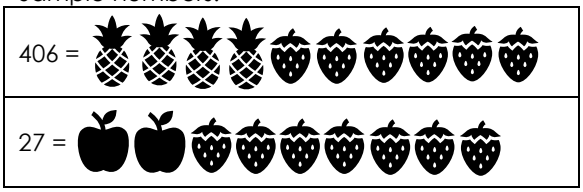
- Prepare drawings, shapes, or items. Associate a value with each item. Do not let the learners know about the code.

Sample items:



- Prepare numbers and their representations using the code. Write it on the board.

Sample numbers:



- Ask the learners to decode the value of each item.
- After the learners have guessed the code, reveal it and explain the values of each item.
- Repeat the activity as needed.

D. Reflection

Ask the learners the following questions:

- What did we learn today?
- Can you represent numbers up to 1000?

III. Homework

Ask the learners to create their own code for representing numbers. Have them write down the objects and their values in their notebook. Ask the learners to use the code to represent 3 numbers between 1 and 1 000. Have them write it in their notebooks.

Term 1 **Number and Algebra**
Lesson 7: Count by 2s, 5s, 10s, 20s, 50s, and 100s (not beyond 1 000).

I. Learning Objectives

At the end of the lesson, the learners must be able to:

1. count by 2s, 5s, 10s, 20s, 50s, and 100s.

II. Development of the Lesson

A. Motivation

Play the "Guess the Pattern" activity with the learners.

- Prepare sequences of 5 numbers. These may be in the pattern of counting by 2s, 5s, 10s, 20s, 50s, and 100s.

Sample sequences:

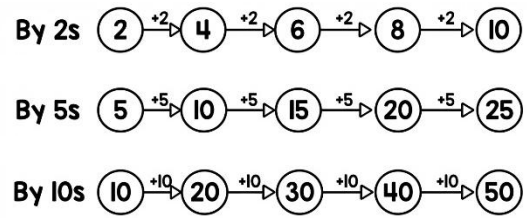
By 2s: 54, 56, 58, 60, 62
By 5s: 655, 660, 665, 670, 675
By 10s: 100, 110, 120, 130, 140
By 20s: 880, 900, 920, 940, 960
By 50s: 250, 300, 350, 400, 450
By 100s: 300, 400, 500, 600, 700

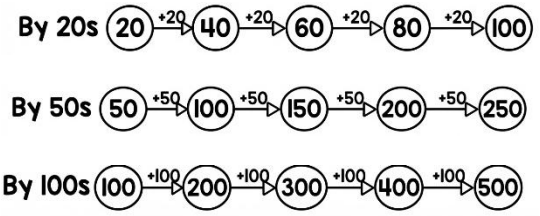
- Write a sequence on the board.
- Ask the learners to identify the pattern used in the sequence.

- Afterwards, reveal the pattern used in the sequence.
- Explain to the learners why the pattern is as it is.
- Repeat the activity as needed.

B. Discussion

1. Explain skip counting: "Skip counting means counting by jumps of the same size, instead of counting one at a time. Each jump adds the same number to get the next number in the sequence."
2. Present the step-by-step procedure for skip counting, using counting by 2s as the example:
   - Step 1: Identify the interval — the number you will keep adding each time (here, 2).
   - Step 2: Start at a chosen number (e.g., 0, or any starting point given).
   - Step 3: Add the interval to the current number to get the next number: 0 + 2 = 2.
   - Step 4: Keep adding the same interval to each new number: 2 + 2 = 4, 4 + 2 = 6, 6 + 2 = 8...
   - Step 5: Continue the pattern: 0, 2, 4, 6, 8, 10, 12...
3. Model the same 5-step procedure for each of the remaining intervals, showing the first several terms of each:
   - Skip counting by 5s: 0, 5, 10, 15, 20, 25, 30...
   - Skip counting by 10s: 0, 10, 20, 30, 40, 50, 60...
   - Skip counting by 20s: 0, 20, 40, 60, 80, 100, 120...
   - Skip counting by 50s: 0, 50, 100, 150, 200, 250, 300...
   - Skip counting by 100s: 0, 100, 200, 300, 400, 500, 600...
4. Point out a pattern learners can use to check their skip counting: when counting by 2s, 10s, 20s, 50s, and 100s, look at the last digit — it repeats in a predictable way (e.g., counting by 2s always ends in 0, 2, 4, 6, or 8; counting by 10s, 20s, 50s, and 100s always ends in 0).





5. Remind the learners that skip counting does not always have to start at 0 — model 1–2 examples starting elsewhere, such as counting by 5s starting at 15: 15, 20, 25, 30, 35, and counting by 100s starting at 300: 300, 400, 500, 600.

C. Practice

1. Prepare sequences of 5 or more numbers. These may be in the pattern of counting by 2s, 5s, 10s, 20s, 50s, and 100s. Put some numbers as blanks.

Sample patterns:

By 2s: 98, ___, 102, 104, ___
By 5s: ___, 260, 265, 270, ___
By 10s: 330, ___, 350, ___, 370
By 20s: ___, 740, ___, 780
By 50s: 500, ___, 600, ___, ___
By 100s: ___, ___, 800, 900, ___

2. Ask the learners to fill in the missing numbers.
3. Repeat the activity as needed.

D. Reflection

Ask the learners the following questions:

- What did we learn today?
- Can you skip count by 2s, 5s, 10s, 20s, 50s, and 100s?

III. Homework

Ask the learners to copy the table below. Have the learners fill in the table. They may choose any starting number that they want.

1. skip counting by 2s: ___, ___, ___, ___, ___
2. skip counting by 5s: ___, ___, ___, ___, ___
3. skip counting by 10s: ___, ___, ___, ___, ___
4. skip counting by 20s: ___, ___, ___, ___, ___
5. skip counting by 50s: ___, ___, ___, ___, ___
6. skip counting by 100s: ___, ___, ___, ___, ___

Term 1 **Number and Algebra**
Lesson 8: Order numbers up to 1 000 from smallest to largest, and vice versa.

I. Learning Objectives
At the end of the lesson, the learners must be able to:

1. order numbers up to 1000 from smallest to largest, and vice versa.

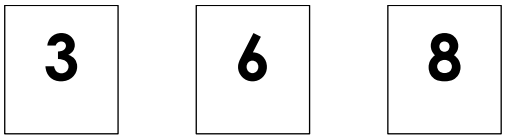
II. Development of the Lesson

A. Motivation

Play the game "Bigger or Smaller" with the learners.

- Prepare flashcards. Put only a one-digit number on the card. Prepare multiple flashcards for each number.

Sample flashcards:



- To start, create 2 numbers between 1 and 1 000 using the flashcards.
- Ask the learners to say which number is bigger, smaller, or equal.
- Afterward, reveal the answer and explain why it is correct.
- Have the learners do the activity.
- Repeat the steps as needed.

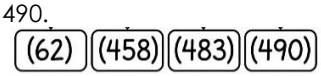
B. Discussion

1. Explain to the learners how to compare two numbers using place value. Present the step-by-step procedure:
   - Step 1: Count the digits in each number. The number with more digits is greater.
   - Step 2: If both numbers have the same number of digits, compare digit by digit, starting from the leftmost (highest place value).
   - Step 3: The number with the bigger digit in that place is the greater number. If the digits are the same, move to the next digit to the right and compare again.
   - Step 4: If every digit matches all the way through, the two numbers are equal.

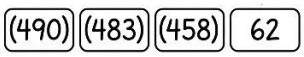
2. Model this procedure with worked examples:
   - 246 and 89: 246 has 3 digits, 89 has 2 digits → 246 is greater (more digits).
   - 531 and 528: both have 3 digits. Compare left to right: hundreds digits are both 5 (same); tens digits are 3 and 2 → 531 is greater, since 3 > 2.
   - 704 and 704: every digit matches → the numbers are equal.
3. Explain that once we can compare two numbers, we can use the same skill to order a group of numbers from smallest to largest (ascending), or largest to smallest (descending).
4. Present the step-by-step procedure for ordering a set of numbers from smallest to largest, using 483, 62, 490, and 458 as the example:



   - Step 1: Compare all the numbers by digit count first. Set aside the number(s) with fewer digits — they are the smallest: 62 (2 digits) is smaller than the rest (3 digits each).
   - Step 2: Among the remaining 3-digit numbers, compare the hundreds digit: 483, 490, and 458 all have 4 in the hundreds place, so move to the tens digit.
   - Step 3: Compare the tens digits: 458 (5 tens), 483 (8 tens), 490 (9 tens) → order them by tens digit: 458, 483, 490.
   - Step 4: Place the smallest-digit-count number first, then the rest in the order found: 62, 458, 483, 490.



5. Explain that ordering from largest to smallest uses the same comparison process — simply reverse the final order: 490, 483, 458, 62.



6. Remind learners that the key strategy for both comparing and ordering is the same: check digit count first, then compare digit by digit from left to right.

C. Practice
1. Prepare sets of numbers with 5 or more numbers in each set. Mix up the order of the numbers.

Sample sets of numbers:

648, 45, 910, 6, 387
974, 12, 65, 720, 789, 500
321, 23, 32, 231, 123, 312, 132

2. Ask the learners to either sort the numbers from least to greatest or greatest to least, or both.
3. Repeat the activity as needed.

D. Reflection
Ask the learners the following questions:
- What did we learn today?
- Can you sort numbers from least to greatest and vice versa?

III. Homework
Ask the learners to copy and answer the problem below. Have the learners write the problem and their answers in their notebook.

Problem: Use the digits 4, 2, and 9 (each digit used only once).

1. What is the largest 3-digit number that can be formed using the digits?

2. What is the smallest 3-digit number that can be formed using the digits?

Term 1 **Number and Algebra**
Lesson 9: Describe the position of objects using ordinal numbers up to 20th.

I. Learning Objectives
At the end of the lesson, the learners must be able to:
1. describe the position of objects using ordinal numbers up to 20th.

II. Development of the Lesson
A. Motivation
Play the "Fall in Line" game with the learners.
- Prepare a list of prompts that the learners can arrange themselves into.

Sample prompts:

Fall in line from shortest to tallest height.
Fall in line from youngest to oldest.
Fall in line from smallest to largest shoe size.
Fall in line by the number of siblings.
Fall in line alphabetically by first name.
Fall in line alphabetically by last name.

- To start the game, divide the learners into groups.
- Say one of the prompts.
- The group that falls in line first gets a point.
- Verify whether the learners lined up correctly.
- Ask the learners a few questions about the order of their line.

Sample questions:

Who is the 1st person in the line?
Who is the last person in the line?
What is the order of the last person in the line?
[name of learner] is the _____ in the line.

- Repeat the game until all the prompts have been used.
- Congratulate the team that won the game.

B. Discussion
1. Explain to the learners what ordinal numbers are.
   - Ordinal numbers indicate the position or order of items in a sequence.

2. Explain the difference between counting and position.
   - Cardinal Numbers
     - Tells us the total amount
     - Answers the question "How many?"
     - Example: "There are 5 apples on the table."

   - Ordinal Numbers
     - Tells us the exact position or order of an object in a line.
     - Answers the question "Which one?"
     - Example: "The red apple is 1st in line."

3. Establish the "start point" before naming any position by explicitly teaching students that they must first find where the line starts.

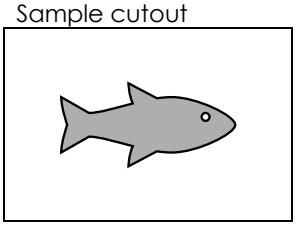
- Pick a clear starting boundary (e.g., a line on the board, an arrow pointing left, or the front door).
- Point out that the object closest to the start is always 1st.
- Show that if the direction changes, the positions change.

C. Practice

Play the "Fish Race Game" with the learners.

- Prepare multiple paper cutouts of a fish. Have the fish in different colors.

Sample cutout



- Prepare fans, pieces of cardboard, or paper plates to be used for the activity. Prepare the fans equal to the number of fish.
- Draw on the floor a starting line and a finish line. Put some distance between the lines.
- Ask for some volunteers from the learners equal to the number of fish.
- Place the fish on the starting line and assign the learners a fish.
- Give the learners a fan.
- The objective of the game is to use the fan to blow the fish to the finish line.
- Have the learners with the fish play the game. Announce when the learners may start fanning the fish.
- The other learners will record who finishes 1st, 2nd, 3rd, etc.
- Repeat the game as needed. You may play the game in a tournament-style format with rankings up to the 20th.
- After, ask the learners questions about the order of who finished the race.

Sample questions:

Who was in 1st place?
[name of learner] finished _____ in the race.
If [name of learner] finished before [name of other learner], what place are they in?
If the learners from 1st to 6th place got disqualified, what place would [name of learner] be in?

- Repeat the entire game as needed.

D. Reflection

Ask the learners the following questions:

- What did we learn today?
- Can you figure out the order of objects in a sequence?

III. Homework

Ask the learners to watch a race online or at school (track and field, etc.). Alternatively, the learners may also rank their favorite movies, TV shows, brands, etc. Have the learners list and rank the items using ordinals from their chosen topic. Ask the learners to write these in their notebooks. The learners may copy and follow the table below.

Topic:
1st:
2nd:
3rd:
4th:
5th: ……

Term 1 **Number and Algebra**

Lesson 10: Determine: (a) the place value of a digit in a 3-digit number, (b) the value of a digit, and (c) the digit of a number, given its place value.

I. Learning Objectives

At the end of the lesson, the learners must be able to:

1. determine the place value of a 3-digit number;
2. determine the value of a digit; and
3. determine the digit of a number, given its place value.

II. Development of the Lesson

A. Motivation

Play the "Number Riddle" game with the learners.

- Prepare numbers that the learners will guess.
- State the place values of the number in a riddle format. Do not reveal the number itself.

Sample riddle:

I have 6 in my hundreds place, 7 in my tens place, and 5 in my ones place. What number am I? (675)
I have 2 in my hundreds place, 0 in my tens place, and 1 in my ones place. What number am I? (201)
I have 8 in my tens place, and 7 in my ones place. What number am I? (87)
I have 9 in my ones place. What number am I? (9)

- Ask the learners to guess what the number is.
- After, explain why the riddle corresponds to that number.
- Have the learners also try the game.
- Repeat the game as needed.

B. Discussion

1. Explain to the learners the concepts of place value and digits.
   - Digits are numerals from 0 to 9, which are used to form numbers.
   - A digit has a value based on its position in a number, which is called its place value.

138		
Digit	**Place Value**	**Value**
1	Hundreds	100
3	Tens	300
8	Ones	800

   - The value of each digit changes depending on its spot.
   - Numbers can be broken down according to their place value. This is called expanded form.
     138 = 100 + 30 + 8

2. To help the learners understand the lesson better, the following activity can be done. Present a number, then ask the learners to identify the place value and digit.
   - Prepare a list of numbers and write them on the board.

Sample numbers:

335	789	416
14	75	1
107	800	706
952	64	4

   - Randomly point to any digit in the numbers.
   - Ask the learners to identify its place value.
   - Repeat the activity as needed.

C. Practice

1. Prepare a list of numbers.

Sample numbers:

501	410	306
20	86	2
777	510	642
909	105	8

2. Using the numbers, ask the learners to fill in the table below.

Number	**Hundreds**	**Tens**	**Ones**

D. Reflection

Ask the learners the following questions:
- What did we learn today?
- Can you determine the place value and digits of numbers?

III. Homework

Ask the learners to copy and answer the problem below. Have the learners write the problem and their answers in their notebook.

Problem: Use the digits 6, 1, and 8 (each digit used only once).

1. What is the largest 3-digit number that can be formed using the digits?

2. What is the smallest 3-digit number that can be formed using the digits?

Term 1 **Number and Algebra**
Lesson 11: Illustrate addition of 2-digit and by 1-digit numbers as "counting up" on the number line.

I. Learning Objectives

At the end of the lesson, the learners must be able to:

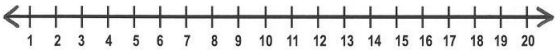
1. add 2-digit and 1-digit numbers by counting up on the number line.

II. Development of the Lesson

A. Motivation

Play the "Number Line Race" game with the learners.
- Prepare a number line up to the number 20. Make sure that it is long and large enough so that the learners can see the numbers.

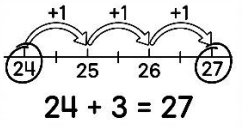
Sample number line:



- Prepare a normal six-sided die.
- Prepare items that can be used as pieces or characters by the learners.
- To start the game, have the learners place their pieces or characters at the 0 position.
- The learners take turns rolling the dice, and they move forward according to the number on the die.
- The first learner to reach the end of the number line (20) wins.
- Repeat the game as needed.

B. Discussion

1. Recall that addition means combining numbers to get a total, called the sum.
2. Present the step-by-step procedure for illustrating addition using "counting up" on the number line, using 24 + 3 as the example:
   - Step 1: Find the first number in the equation, 24, on the number line. This is your starting point.
   - Step 2: Since we are adding, move forward (to the right), this means we count up.
   - Step 3: Make hops forward that match the second number, 3. Hop forward one number at a time: 24, 25, 26, 27 (3 hops in all).



24 + 3 = 27

   - Step 4: The number where your hops end is the sum: 27.
   - Step 5: Write the complete number sentence: 24 + 3 = 27.
3. Teach a helpful strategy: when adding a 2-digit number and a 1-digit number, it is easier to start counting up from the **bigger number**, no matter which one comes first in the equation. For example, in 5 + 32, it is easier to start at 32 and hop forward 5 times (32, 33, 34, 35, 36, 37), rather than starting at 5 and hopping forward 32 times.
4. Model this strategy with the class, comparing both ways for the same equation, and letting learners see that starting from the bigger number reaches the same sum with far fewer hops.
5. Model 1–2 more complete examples using different 2-digit and 1-digit combinations, such as 46 + 4 = 50 and 7 + 61 = 68, having learners count the hops aloud each time.

C. Practice

Play the "Floor Line" game with the learners.

- Prepare a big number line on the floor of the room. You may use masking tape and sticky notes with numbers.
- Prepare equations for the learners to solve.

Sample equations:

8 + 5 = ___	6 + 7 = ___	8 + 9 = ___
12 + 8 = ___	5 + 7 = ___	13 + 6 = ___
11 + 4 = ___	3 + 6 = ___	5 + 9 = ___
17 + 2 = ___	15 + 5 = ___	18 + 1 = ___

- Have 1 learner start at the 0 position on the number line. Assign an equation for the learner to solve and write it on the board.
- Ask the learner to solve the equation by hopping to solve the sum of the equation.
- Repeat the activity until all the learners have solved at least 1 equation.

D. Reflection

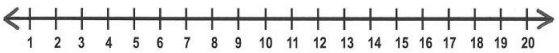
Ask the learners the following questions:

- What did we learn today?
- Can you add numbers by counting up on the number line?

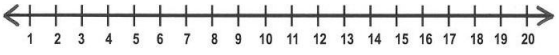
III. Homework

Ask the learners to answer the following equations in their notebooks. Have the learners draw a number line and count up to solve for the sum. You may include more equations that the learners may solve.

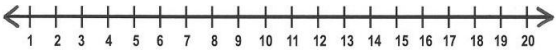
1) 16 + 3 = ___



2) 8 + 9 = _____



3) 13 + 6 = _____



Term 1 **Number and Algebra**
Lesson 12: Add numbers with sums up to 1 000 in expanded form.

I. Learning Objectives
At the end of the lesson, the learners must be able to:

1. add numbers in expanded form up to 1 000.

II. Development of the Lesson

A. Motivation

Play the "Equation Flip" game with the learners.

- Prepare flashcards with equations on them. Make sure that the equations add up to a maximum of 1000 and do not require regrouping.

Sample flashcards:

345 + 123	155 + 244
57 + 42	709 + 280
416 + 23	830 + 100

- Lay the flashcards face down on a flat surface.
- Have at least 2 learners play the game at a time.
- To start the game, the first learner begins their turn by flipping one of the flashcards.
- The learner reads the equation and must solve it. You may add a time limit for answering.
- If the learner was able to answer the equation, they get to keep the card.
- If the learner failed to answer the equation correctly, the other learner may try to answer the equation.
- If the other learner answered the equation correctly, they get to keep the card.
- After, the next learner takes their turn and repeats the steps above.
- The winner of the game is the learner who collected the most cards.
- Repeat the activity as needed.

B. Discussion

1. Before adding, make sure students remember how to stretch a 3-digit number into Hundreds, Tens, and Ones.
   - Standard form: 345
   - Expanded form: 300 + 40 + 5
     - The 3 is worth 300
     - The 4 is worth 40
     - The 5 is worth 5

2. Explain to the learners how to add in expanded form.
   - To start, you separate or expand each number based on its place values.
   - Then you group the same place values (hundreds, tens, ones) and add each group.
   - Lastly, combine all the sums to get the final answer.

C. Practice

Play the "Math Baseball" game with the learners.

- Group the learners into 2 teams.
- Ask each team to think of 11 equations for the opposite team to solve. Do not let the learners on the opposite team see the equations of the other team.
- Check the equations that each team created. Make sure that the equations add up to a maximum of 1000 and do not require regrouping.

Sample equations:

188 + 11 =	75 + 23 =	741 + 256 =
501 + 406 =	170 + 604 =	83 + 5 =
651 + 200 =	728 + 150 =	203 + 81 =

- Each team takes turns "pitching" their equations for the other team to answer. You may add a time limit for answering.
- If the opposite team is able to answer the equation, they get a point.
- If the opposite team fails to answer the equation correctly, the team that made the equation gets a point.
- After that, the opposite team takes their turn and repeats the steps above.
- The first team to get to 10 points wins the game.
- Repeat the game as needed.

D. Reflection

Ask the learners the following questions:

- What did we learn today?
- Can you add numbers in expanded form up to 1000?

III. Homework

Ask the learners to answer the problems below. Have the learners copy the problems and write their answers in their notebooks.

25 + 51 =	67 + 13 =
149 + 30 =	775 + 22 =
911 + 66 =	224 + 164 =
400 + 309 =	626 + 210 =
678 + 321 =	904 + 65 =

Term 1 **Number and Algebra**

Lesson 13: Add numbers with sums up to 1000, with or without regrouping.

I. Learning Objectives

At the end of the lesson, the learners must be able to:

1. add numbers with or without regrouping, up to 1000.

II. Development of the Lesson

A. Motivation

Play the "Math Hot Potato" game with the learners.

- Prepare equations for the learners to solve. Write each equation down on a piece of paper.

Sample equations:

167 + 347 =	934 + 29 =	641 + 302 =
705 + 260 =	321 + 609 =	757 + 60 =
617 + 250 =	806 + 99 =	267 + 479 =

- Fold the equations and put them in a box or in a container.
- Prepare a ball or an object that the learners can hold and pass to each other.
- Ask the learners to form a circle.
- Give one of the learners the ball.
- Play music and have the learners pass the ball until the music stops.
- The learner who has the ball when the music stops will get a paper from the container.
- The learner reads the equation on the paper and tries to solve it.
- If the learner answers it correctly, they get to stay in the circle. If not, they get removed from the circle.
- Then repeat the previous steps.
- The winner of the game is the last learner in the circle.
- Repeat the entire game as needed.

B. Discussion

1. Explain to the learners how to add without regrouping.
   - First, align the numbers vertically according to their place values (hundreds, tens, and ones).
   - Then, add each column vertically from right to left.
   - Write the result of each column below the line to obtain the final answer.

2. Explain to the learners how to add without regrouping.
   - First, align the numbers vertically according to their place values (hundreds, tens, and ones).
   - Then, add each column vertically from right to left.
   - Start with the digits in the ones column.
   - If the sum is 9 or less, write the result. If the sum is 10 or higher, write the ones digit of the sum under the line in the ones place, and group the tens digit (1) to the top of the tens column.
   - Then, add the tens column, including the number you grouped.
   - If this sum is 10 or more, group the 1 over to the hundreds place, and so on.
   - Repeat the process for the following columns.

C. Practice

Play the game "Jeopardy" with the learners.

- Prepare the game board. You may use a manila paper as the game board. Stick the manila paper on the board.
- Prepare questions for each category and amount. Do not show the questions until the category and amount are both chosen.

Sample Jeopardy game board: (Hide the questions and answers)

Easy	Medium	Hard
200pts. 25 + 40 Answer: 65	200pts. 47 + 39 Answer: 88	200pts. This is the process of adding something to something else. Answer: Addition
400pts. 56 + 42 Answer: 98	400pts. 85 + 76 Answer: 161	400pts. This is a line that shows real numbers in sequential order. Answer: Number line
600pts. 504 + 65 Answer: 569	600pts. 706 + 67 Answer: 773	600pts. This is the numerical value a digit has based on its position in a number. Answer: Place value
800pts. 634 + 252 Answer: 886	800pts. 328 + 649 Answer: 977	800pts. This is the process of reorganizing numbers by place value. Answer: Grouping
1000pts. 753 + 246 Answer: 999	1000pts. 567 + 433 Answer: 1000	1000pts. This is also known as carrying in addition. Answer: Regrouping

- Divide the learners into teams.
- One learner from each team will be the representative for each round. The representative changes each round.
- The first team chooses a category and amount to answer.
- Read the question to the representatives of both teams.
- The representative of each team answers the question by raising their hand (whoever raises their hand first). Once acknowledged, they say their answer.
- If the answering team did not answer the question correctly, the other team can attempt to answer the question.
- The team that answered correctly gets the associated number of points and can choose the next category and amount to answer.
- After a category and amount have been chosen, mark the game board that it has already been used.
- Repeat the process until all the categories and amounts have been used.
- The team with the highest number of points wins.
- Repeat the game as needed.

D. Reflection

Ask the learners the following questions:

- What did we learn today?
- Can you add numbers with or without regrouping, up to 1000?

III. Homework

Ask the learners to answer the problems below. Have the learners copy the problems and write their answers in their notebooks.

689 + 283	467 + 158
599 + 365	276 + 187
109 + 419	757 + 155
613 + 397	517 +288
186 + 469	801 + 199

Term 1 **Number and Algebra**

Lesson 14: Illustrate and apply the following properties of addition using sums up to 1000: (a) the sum of zero and any number is equal to the number, (b) changing the order of the addends does not change the sum, and (c) changing the grouping of the addends does not change the sum.

I. Learning Objectives

At the end of the lesson, the learners must be able to:

1. illustrate and apply the zero property of addition;
2. illustrate and apply the order property of addition; and
3. illustrate and apply the identity property of addition.

II. Development of the Lesson

A. Motivation

1. Play the "Math Hot Potato" activity with the learners. (identity property)
   - Prepare equations for the learners to solve. Write each equation down on a piece of paper.

Sample equations:

51 + 0 =	934 + 0 =	641 + 0 =
705 + 0 =	321 + 0 =	0 + 60 =
0 + 250 =	0 + 99 =	0 + 479 =

   - Fold the equations and put them in a box or in a container.
   - Prepare a ball or an object that the learners can hold and pass to each other.
   - Ask the learners to form a circle.
   - Give one of the learners the ball.
   - Play music and have the learners pass the ball until the music stops.
   - The learner who has the ball when the music stops will get a paper from the container.
   - The learner reads the equation on the paper and tries to solve it.
   - If the learner answers it correctly, they get to stay in the circle. If not, they get removed from the circle.
   - Then repeat the previous steps.
   - The winner of the game is the last learner in the circle.
   - Repeat the entire game as needed.

2. Play the "Flashcards Flip" activity with the learners. (commutative property)
   - Prepare flashcards. Put only a one-digit number on the card. Prepare multiple flashcards for each number.

Sample flashcards:



   - To start, create 2 numbers between 1 and 1000 using the flashcards. Make sure that their sum does not go over 1000.
   - Ask the learners to add both numbers.

Sample equations:

512 + 379
413 + 128
739 + 209

   - Afterward, reveal the answer and explain why it is correct.
   - Then, flip the order of the numbers.

Sample equations:

379 + 512
128 + 413
209 + 793

   - Ask the learners to add both numbers.
   - Afterward, reveal the answer and explain why it is correct.
   - Have the learners do the activity.
   - Repeat the steps as needed.

3. Play the "Parenthesis Partners" activity with the learners. (associative property)
   - Prepare equations for the learners to solve. There should be 3 numbers, and the total sum should not go over 1000.

Sample equations:

54 + 12 + 133 =
142 + 389 + 215 =
412 + 108 + 475 =

   - Write an equation on the board. Ask the learners to solve it.
   - Draw parentheses to group the numbers in different ways.

Sample equations:

(54 + 12) + 133 = or 54 + (12 + 133) =
(142 + 389) + 215 = or 142 + (389 + 215) =
(412 + 108) + 475 = or 412 + (108 + 475) =

- Ask the learners to solve the new equations.
- After, repeat the steps above using different equations.
- Repeat the activity as needed.

B. Discussion

1. Explain to the learners the zero property of addition.
   - It is also called the identity property of addition.
   - Adding zero to any number results in the same number, making zero the additive identity.
   - 176 + 0 = 176

2. Explain to the learners the order property of addition.
   - It is also called the commutative property of addition.
   - The order of the addends does not change the sum.
   - 132 + 754 = 754 + 132

3. Explain to the learners the grouping property of addition.
   - It is also called the associative property of addition.
   - The grouping of addends does not change the sum.
   - (167 + 346) + 258 = 167 + (346 + 258)

C. Practice

Play the "Math Stations" game with the learners.

- Prepare 4 stations around the room. Zero station, Order station, Grouping station, and the Wildcard station.
- Prepare problems equal to the number of learners in a team. The problems should be related to each station. Write all the problems on a piece of paper. Make 2 copies of that paper, one for each team.

Zero station sample:

489 + 0 = _____
0 + 223 = _____
759 + _____ = 759
_____ + 0 = 34
0 + _____ = 319

Order station sample:

454 + 170 = _____ + 454
617 + 401 = 401 + _____
560 + _____ = 364 + 560
_____ + 512 = 512 + 358
339 + _____ = 497 + _____

Grouping station sample:

(18 + 42) + 95 = _____ + (42 + 95)
247 + (183 + 319) = (247 + _____) + 319
(338 + 214) + 447 = 338 + (214 + _____)
_____ + (159 + 130) = (749 + 159) + 130
(402 + _____) + 84 = 402 + (332 + 84)

Wildcard station sample:

_____ + 359 = _____ + 617
_____ + 0 = 679
(_____ + 19) + 512 = 407 + (_____ + 512)
42 + (619 + _____) = (_____ + 619) + 104
247 + _____ = 749 + _____

- To start the game, divide the learners into 2 teams and have them form a line.
- When you say go, the first learner in each team goes to the 1st station. They pick one of the problems on their team paper and answer it. Once they have answered a problem, they can move to the next station.
- This continues until the 1st learner has gone through all 4 stations.
- Once the 1st learner of their team has completed all 4 stations, the 2nd learner can start going through the stations.
- Repeat the steps until all learners have taken their turn.
- The first team whose learners complete all four stations correctly wins the game.
- Repeat the game as needed.

D. Reflection

Ask the learners the following questions:

- What did we learn today?
- Can you apply the properties of addition?

III. Homework

Ask the learners to copy the problems below. Have the learners fill in the blanks of the equations. Ask the learners to write "I" if the equation shows the identity property, "C" if the equation shows the commutative property, and "A" if the equation shows the associative property of addition.

_____ 1) 166 + 345 = 345 + 166
_____ 2) 516 + (27 + 95) = (516 + 27) + 95
_____ 3) 56 + 787 = 787 + 56
_____ 4) 0 + 550 = 550
_____ 5) (670 + 28) + 325 = 670 + (28 + 325)

Term 1 **Numbers and Algebra**

Lesson 15: Determine and write the value of a number of bills, or a number of coins, or a combination of bills and coins up to ₱1 000 (centavo coins only, peso coins only, peso bills only, combined peso coins and peso bills).

I. Learning Objectives

At the end of the lesson, the learners must be able to:

1. determine and write the value of peso bills and coins.

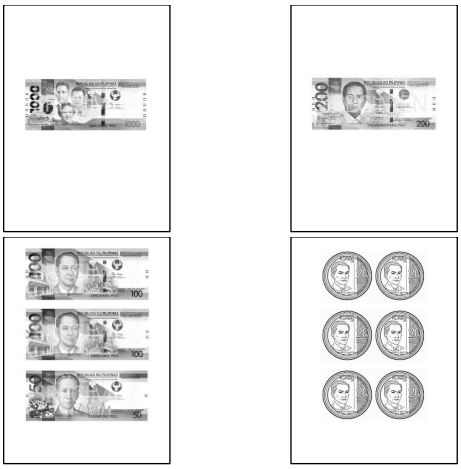
II. Development of the Lesson

A. Motivation

Play the "Money Battle" game with the learners.

- Prepare flashcards with images of varying amounts of money.

Sample flashcards:



- Have at least 2 volunteer learners play the game at a time.
- Distribute cards evenly and face down to the learners. Make sure the learners do not see their cards or the cards of the other learners.
- On the count of 3, the learners pick a card from their stack and flip it up.
- The learner with the higher amount gets to keep the cards.
- If the amounts are the same, keep the cards in the middle and play another round.
- Once a card has been used, it cannot be used again.
- Repeat the steps above.
- The learner who collects the most cards wins the game.
- Repeat the game as needed.

B. Discussion

Explain to the learners how to determine the value of peso bills and coins.

- Each bill and coin has a value in pesos. You may use the chart below to show the value of bills and coins. Alternatively, you may demonstrate using play money.

Sample table:

Denomination	Value
	₱1 000 1 000 Pesos
	₱ 500 500 Pesos
	₱ 200 200 Pesos
	₱ 100 100 Pesos
	₱ 50 50 Pesos
	₱ 20 20 Pesos
	₱ 20 20 Pesos
	₱ 10 10 Pesos
	₱ 5 5 Pesos
	₱ 1 1 Peso
	₱ 0.25 25 centavos
	₱ 0.05 5 centavos
	₱ 0.01 1 centavo

- To determine the value of multiple coins and bills, sort the peso bills and coins by value and

use skip counting and addition to find their total value in pesos.

C. Practice

Play "Shop" with the learners.

- Prepare a list of items and their costs in pesos.

Sample items and costs:

Item	Cost
 Button	₱ 0.75
 Alarm Clock	₱ 359
 Shoes	₱ 1 000

- Have the learners use play money.
- Ask the learners to use their play money to represent the cost of the item.
- Check if the learners were able to match the cost of the item and its equivalent in play money.
- Repeat the activity as needed.

D. Reflection

Ask the learners the following questions:

- What did we learn today?
- Can you determine the value of peso coins and bills?

III. Homework

Ask the learners to recall an item they or their family has bought with money. Ask the learners to write the name of the item and its cost in their notebook. Additionally, have the learners draw bills and coins to represent the cost of the item.

Term 1 **Numbers and Algebra**

Lesson 16: Compare the values of different denominations of peso coins and bills up to ₱1 000.

I. Learning Objectives

At the end of the lesson, the learners must be able to:

1. compare the values of different denominations of peso coins and bills up to ₱1 000.

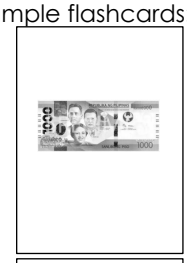
II. Development of the Lesson

A. Motivation

Play the "Money Match" game with the learners.

- Prepare flashcards with money and its value in pesos on a different card.

Sample flashcards:



₱ 1 000



₱ 250

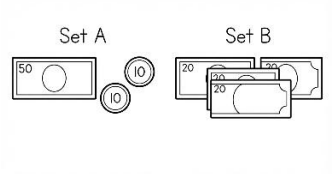
- Lay the cards face down on a flat surface. Arrange them in rows and columns.
- Ask the learners to take turns flipping over two cards. If the money card and the value card match, the learner keeps the cards and takes another turn.
- The learners take turns until no cards are left.
- The learner with the most matches at the end wins.
- Repeat the game as needed.

B. Discussion

1. Recall the peso coins and bills learners will work with:
   - Coins: ₱1, ₱5, ₱10, ₱20
   - Bills: ₱20, ₱50, ₱100, ₱200, ₱500, ₱1,000
2. Explain what it means to compare: "When we compare peso values, we find out which set of money is worth more, which is worth less, or if both are worth the same." Write the three phrases on the board and have learners read them aloud:
   - is greater than (worth more)
   - is less than (worth less)
   - is equal to (worth the same)
3. Present the step-by-step procedure for comparing two sets of money, using this example. Set A is one ₱50 bill and two ₱10 coins. Set B is three ₱20 bills.
   - Step 1: Find the total value of Set A. Start with the biggest

value, then count on: 50, 60, 70. Set A is worth ₱70.

- Step 2: Find the total value of Set B. Skip count by 20s: 20, 40, 60. Set B is worth ₱60.



- Step 3: Compare the two totals using place value. Both numbers have 2 digits, so compare the tens digits: 7 tens is more than 6 tens.
- Step 4: Say the comparison with a phrase: "₱70 is greater than ₱60. Set A is greater than Set B." You can also say it the other way: "₱60 is less than ₱70."

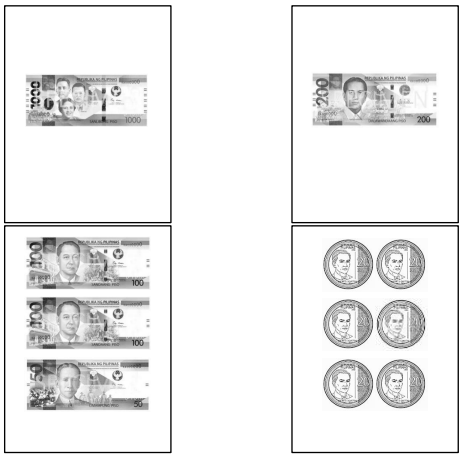
4. Share a tip for finding the total: start with the biggest denomination, then count on with the smaller ones. Counting the ₱50 bill first, then counting on by 10s (60, 70), is faster and makes fewer mistakes than starting with the small coins.
5. Model an example where the values are equal. Set A is one ₱100 bill. Set B is five ₱20 bills.
   - Set A is worth ₱100.
   - Set B: 20, 40, 60, 80, 100. It is worth ₱100.
   - Compare: "₱100 is equal to ₱100."
   - Point out that the same amount of money can be made in different ways.
6. Model an example that shows why we compare values, not the number of pieces. Set A is eight ₱5 coins. Set B is one ₱50 bill.
   - Set A: 5, 10, 15, 20, 25, 30, 35, 40. It is worth ₱40.
   - Set B is worth ₱50.
   - Compare: "₱40 is less than ₱50." Ask: "Set A has more pieces. Why is it worth less?" Guide learners to see that a bigger denomination is worth more than several small ones.
7. Model an example with larger amounts (up to ₱1,000). Set A is one ₱500 bill and two ₱100 bills. Set B is three ₱200 bills and one ₱50 bill.
   - Set A: 500, 600, 700. It is worth ₱700.
   - Set B: 200, 400, 600, then 650. It is worth ₱650.
   - Compare the hundreds digits first: 7 hundreds is more than 6 hundreds.
   - Say: "₱700 is greater than ₱650."
8. Remind learners of the common mistake: **counting the pieces instead of the value.** Before comparing, always find the total value of each set first.

C. Practice

Play the game "Bigger or Smaller" with the learners.

- Prepare flashcards with images of varying amounts of money.

Sample flashcards:



- To start, pick 2 random flashcards.
- Ask the learners to determine which amount is greater than, less than, or equal to the other.
- Afterward, reveal the answer and explain why it is correct.
- Have the learners do the activity.
- Repeat the steps as needed.

D. Reflection

Ask the learners the following questions:

- What did we learn today?
- Can you compare the peso value of different sets of money?

III. Homework

Ask the learners to copy the problem below in their notebook. Ask the learners to answer the questions that follow.

Kim has three one-hundred-peso bills and five twenty-peso coins. Gelo has ten fifty-peso bills and fifteen pieces of the five-peso coins.
Kim has ₱ _____
Gelo has ₱ _____
_____ has more money than _____
In total, they both have _____

Term 1 **Numbers and Algebra**
Lesson 17: Solve problems involving addition with sums up to 1 000, including problems involving money, with and without regrouping.

I. Learning Objectives
At the end of the lesson, the learners must be able to:

1. solve problems involving addition with sums up to 1 000, including problems involving money, with and without regrouping.

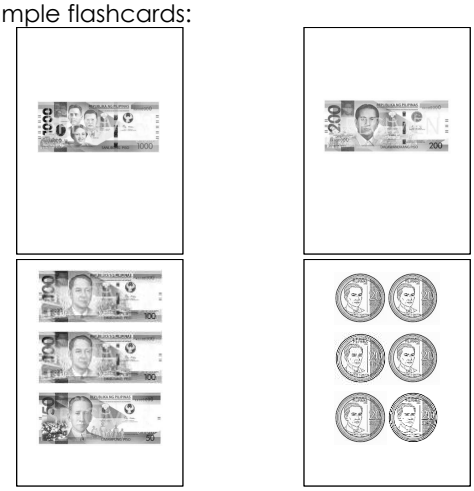
II. Development of the Lesson

A. Motivation

Play the "Addition Money Battle" game with the learners.

- Prepare flashcards with images of varying amounts of money.

Sample flashcards:



- Have at least 2 volunteer learners play the game at one time.
- Distribute cards evenly and face down to the learners. Make sure the learners do not see their cards or the cards of the other learners.
- On the count of 3, the learners flip 2 cards from their stack.
- The learners add the amounts of both cards. The learner with the biggest sum gets to keep the cards.
- If the sums are the same, keep the cards in the middle and play another round.
- Once a card has been used, it cannot be used again.
- Repeat the steps above.
- The learner who collects the most cards wins the game.
- Repeat the game as needed.

B. Discussion

1. Explain to the learners how to add without regrouping.
   - First, align the numbers vertically according to their place values (hundreds, tens, and ones).
   - Then, add each column vertically from right to left.
   - Write the result of each column below the line to obtain the final answer.

2. Explain to the learners how to add with regrouping.
   - First, align the numbers vertically according to their place values (hundreds, tens, and ones).
   - Then, add each column vertically from right to left.
   - Start with the digits in the ones column.
   - If the sum is 9 or less, write the result. If the sum is 10 or higher, write the ones digit of the sum under the line in the ones place, and group the tens digit (1) to the top of the tens column.
   - Then, add the tens column, including the number you grouped.
   - If this sum is 10 or more, group the 1 over to the hundreds place, and so on.
   - Repeat the process for the following columns.

C. Practice

Play the "Grocery" game with the learners.

- Prepare a list of items that can be bought in the grocery and their cost in pesos.

Sample items and costs:

Item	Cost
 fish	₱ 80
 tomato	₱ 10
 okra	₱ 20

- Prepare a list of recipes and their ingredients.

Sample recipes:

Sinigang: ✓ 2 Fish ✓ 5 Sampalok ✓ 1 Onion ✓ 3 Tomatoes ✓ 1 Labanos ✓ 1 String beans ✓ 2 Okra ✓ 2 Kangkong
Adobo: ✓ 3 Chicken ✓ 1 Soy sauce ✓ 1 Vinegar ✓ 1 Water ✓ 2 Garlic ✓ 2 Laurel ✓ 3 Peppercorns

- Present one recipe at a time.
- Ask the learners to get the sum of the costs of all the ingredients for the recipe.
- Check whether the learners were able to find the total cost of the ingredients to cook the recipe.
- Repeat the activity as needed.

D. Reflection

Ask the learners the following questions:

- What did we learn today?
- Can you add money up to 1 000?

III. Homework

Ask the learners to copy and answer the problem below in their notebooks.

Johny needs to buy school supplies for a school project. He needs one pair of scissors, two cardboard boxes, two rolls of tape, two markers, one pencil, one ballpen, one ruler, and one paint set. The cost of each school supply is listed below. How much do all the school supplies cost?

Scissors - ₱ 93	Cardboard box - ₱ 42
Roll of tape - ₱ 35	Marker - ₱ 46
Pencil - ₱ 7	Ballpen - ₱ 21
Ruler - ₱ 41	Paint set - ₱ 575


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