

1st Quarter Grade 2 Supplemental Lesson Plan

Properties of Addition

Introduction

As a preliminary activity, let the pupils do the following:

- a. Form pairs.
- b. Instruct the pupils to identify from the pair who is RIGHT and LEFT.
- c. Show pupils pictures of objects and post them on the board.
- d. Ask the pairs to write a number sentence that involves addition of the two pictures that you posted, but the RIGHT pupil will always start counting or adding from the right and the LEFT pupil will always start from the left picture/number.
- e. Show also an empty picture that represents zero.

Body

1. Use the preliminary activity as a springboard to introduce the commutative property and identity property of addition.
2. Show to the class two numbers and let them find their sum. Then change the order of the addends and find the sum again. Ask the pupils:
 - a. What is the sum?
 - b. Is the sum different when we change the order of the addends?
 - c. Try again with different numbers. Does changing the order of the addends affect the sum?
3. Show to the class another number. This time, ask the pupils to add it to the number 0. Find the sum. Change the order of the addends. Let the pupils add 0 with another number. Then ask the pupils:
 - a. What did you notice with the sum?

Knowledge

Properties of addition

Learning Competency

M2NS-Ig-26.3

- Illustrates the properties of addition (commutative, associative, identity) and applies each in appropriate and relevant situations

KU

Numbers can be represented in many ways such as with base ten blocks, words, pictures, number lines, and expanded form.

KQ

How do operations affect numbers?

- b. What is the sum when a number is added to 0?
Or when zero is added to a number?

4. Show to the class the given number sentence:

$$(24 + 87) + 55 = \underline{\hspace{2cm}}$$

- a. Let the pupils find the sum.
b. Then, change the groupings of the addends and ask the pupils to find the sum.

$$24 + (87 + 55) = \underline{\hspace{2cm}}$$

c. Ask the pupils:

- What did you notice about the first and the second number sentence?
- What is the sum of the two number sentences?
- What can you say about this?
- Is this true for all numbers?

5. After discussing the properties, let the pupils watch and listen to a song for properties of addition.

6. Give the pupils a worksheet to work on for practice and pattern recognition.

7. For enrichment, let the pupils choose one task from the following:

- a. Form pairs. Ask the pairs to give their own example of number sentence that shows the properties of addition. Let the pairs exchange paper and check their partner's work.
- b. Ask the pupils to create a short story/scenario that will show properties of addition.
- c. Ask the pupils to explain the properties of addition to a friend through drawing an illustration.

Differentiated Activities

Conclusion

To facilitate the summary of the lesson, let the pupils show **Smiley Signal Cards** to represent their understanding of properties of addition.



1. I understand the properties of addition.
2. I can give my own example of number sentence that shows the properties of addition.
3. I can apply my knowledge of properties of addition to real-life situations.

Adding 2-Digit by 3-Digit Numbers with Sums up to 1000

Introduction

Write the following on the board:

- A. $0 + 43 =$
 - B. $98 + 0 =$
 - C. $5 + 8 + 9 =$
- a. What do letters A and B remind us about addition?
 - b. In how many ways can we add the numbers in C?
 - c. Call on volunteers to share their answers and explain their claim.

Body

1. Conduct a recall on how to add two-digit numbers.
Step 1: Add the ones.
Step 2: Add the tens.
2. Tell the class to always remember that the steps must be in order from ones to tens.
3. Write on the board the addition sentence:

$$\begin{array}{r} 456 \\ + \underline{23} \end{array}$$

Knowledge

Addition of 2-digit by 3-digit numbers with and without regrouping with sums up to 1000

Learning Competency

M2NS-Ig-27.4

- Visualizes, represents, and adds 2-digit by 3-digit numbers with sums up to 1000 without and with regrouping

KU

Place value determines which number is greater or smaller than the others.

4. Explain to the pupils that to add numbers, align the numbers with the right place value. That is, adding the ones, 6 and 3 gives 9, and the tens 5 and 2 gives 7. Since there is no hundred in 23, just bring down 4 in the hundreds place of the sum, which gives a sum of 479.

$$\begin{array}{r} 456 \\ + \ 23 \\ \hline 479 \end{array}$$

5. Give the pupils more examples until they are familiar with the steps.
6. Post another addition sentence:

$$\begin{array}{r} 456 \\ + \ 39 \\ \hline \end{array}$$

7. Ask the pupils: What do you need to add first? (Add the ones.) What do you notice when you add the ones? (15 has 1 ten and 5 ones.)
8. Explain to the pupils that since 15 has 1 ten and 5 ones, we can regroup the 1 ten to the tens place, leaving 5 ones in the sum. Since the sum of the tens 5 and 3 is 8, regrouping the 1 ten to 8 tens, we have 9 tens, which makes the sum of 456 added to 39, 495.
9. Give more examples for pattern recognition.
10. Let the pupils do an interactive web game on adding numbers with and without regrouping. (Sample site: <http://www.math-play.com/Addition-Game.html>)

KQ

How does place value help us solve problems?

Multi-Digit Addition Game

This addition game can be played alone or in pairs. It reviews addition facts with whole numbers. This game can also be played at school by dividing the classroom in two teams.



Adding Whole Numbers

by Donna Peppercorn
Created - April 24 February 2012

Click [here](#) to play another basketball game with [one-digit addition](#) problems.
The [addition game](#) is provided by [Math-Play.com](#).
Return to the [Elementary Math Games](#) page or to the [Math Basketball](#) webpage.

Multi-Digit Addition Game

This addition game can be played alone or in pairs. It reviews addition facts with whole numbers. This game can also be played at school by dividing the classroom in two teams.



by Donna Peppercorn

A 760
B 1013
C 770
D 870

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Conclusion

To assess the pupils' understanding of the lesson, let them answer this **Thumb It! Activity**.



means "I understand it."



means "I understand some of it."



means "I do not understand."

1. I can add two numbers without regrouping correctly.
2. I can add two numbers with regrouping correctly.
3. I can add three addends correctly.
4. I can add numbers correctly without help from others.

Adding 3-Digit by 3-Digit Numbers with Sums up to 1000

Introduction

To assess the pupils' prior knowledge, ask them to answer the Before Column of the Anticipation-Reaction Guide below:

Before	Given	After
	$346 + 123 =$	
	$789 + 108 =$	
	$265 + 558 =$	

Body

1. Write the given addition sentence $876 + 123 = \underline{\quad}$ on the board.
2. Call on volunteers to answer the given sentence on the board.

Knowledge

Adding 3-digit numbers by 3-digit numbers with sums up to 1000

Learning Competency

M2NS-Ih-27.5

- Visualizes, represents, and adds 3-digit by 3-digit numbers with sums up to 1000 without and with regrouping

- a. If the pupil got it correctly, ask the pupil how he/she came up with the answer.
 - b. If the pupil got it incorrectly, lead the pupil to the correct answer.
3. Conduct a whole-class discussion on how to add 3-digit number by a 3-digit number.
- a. Without Regrouping
Tell the pupils to remember the following simple steps in adding 3-digit numbers:
STEP 1: Add the ones.
STEP 2: Add the tens.
STEP 3: Add the hundreds.
Emphasize to the pupils that the order of adding is important, that is, adding from ones to hundreds.
 - b. With Regrouping
 - Show to the class the addition sentence $678 + 232$.
 - If base ten blocks are available, ask the pupils to show the numbers using the blocks.
 - Explain each step of adding with regrouping, and show the vertical addition also as the discussion goes along.
 - Emphasize the appropriate placing of digit and 0 has to be written in the right place to keep the place value of the rest of the numbers.
4. Give the pupils several practice exercises.
5. For enrichment, let the pupils choose from the given tasks below:
- a. Answer exercises which involve three addends. (e.g. $103 + (345 + 87)$)
 - b. Explain into writing: In the sum of $876 + 124$, why must we write "0" in the ones, tens, and hundreds place?

Differentiated Activities

Various online tools which make teaching and learning richer and more meaningful are just a few clicks away!

Conclusion

Ask the pupils to answer the After Column of the Anticipation-Reaction Guide, then let them answer the question:

When you get home, what will you tell your parents about what you learned today?

