Math Lesson Plan

Grade Level & Subject Area: 2nd Grade Math – Addition within 1000

Standards/Framework (State Standards, Content Standards, InTASC Standards)
- AR.Math.Content.2.NBT.B.5 – Add and subtract within 100 with computational fluency using strategies based on place value, properties of operations, and the relationship between addition and subtraction.
- AR.Math.Content.2.NBT.B.6 – Add up to four two-digit numbers using strategies based on place value and properties of operations.
- AR.Math.Content.2.NBT.B.9 – Explain why addition and subtraction strategies work, using place value and the properties of operations.

Theme/Series of Lessons (if Not applicable, put N/A. If it is part of a series, of lessons, tell me, give a BRIEF description of the overall and tell me where this particular lesson fits):
This lesson will be the first lesson in a series of lessons that discuss different strategies for solving addition problems with increasing complexity. This lesson will introduce the different strategies available, laying them out in their entirety, with later lessons focusing on one of the individual strategies at a time to solve two and three-digit problems.

Time (is this a 1 day 50 minute lesson, 5 day 1 hour lesson, once a week over a month lesson….):
Initially this is a one day, one hour lesson, and the strategies will be reinforced through mini lessons once per week throughout the remainder of the year.

What do the students already know? (This could be the Intro or they have learned information before starting this lesson):
Based on the standards, the students should already know how to add two-digit numbers within 100. Depending on their first-grade teacher, they may know different or limited strategies. These strategies will help extend their skills to adding three-digit numbers within 1000.

Objective (What are the students' going to accomplish):
The students will be able to solve two-digit addition problems correctly using the four strategies introduced, at least one of each problem for each strategy.
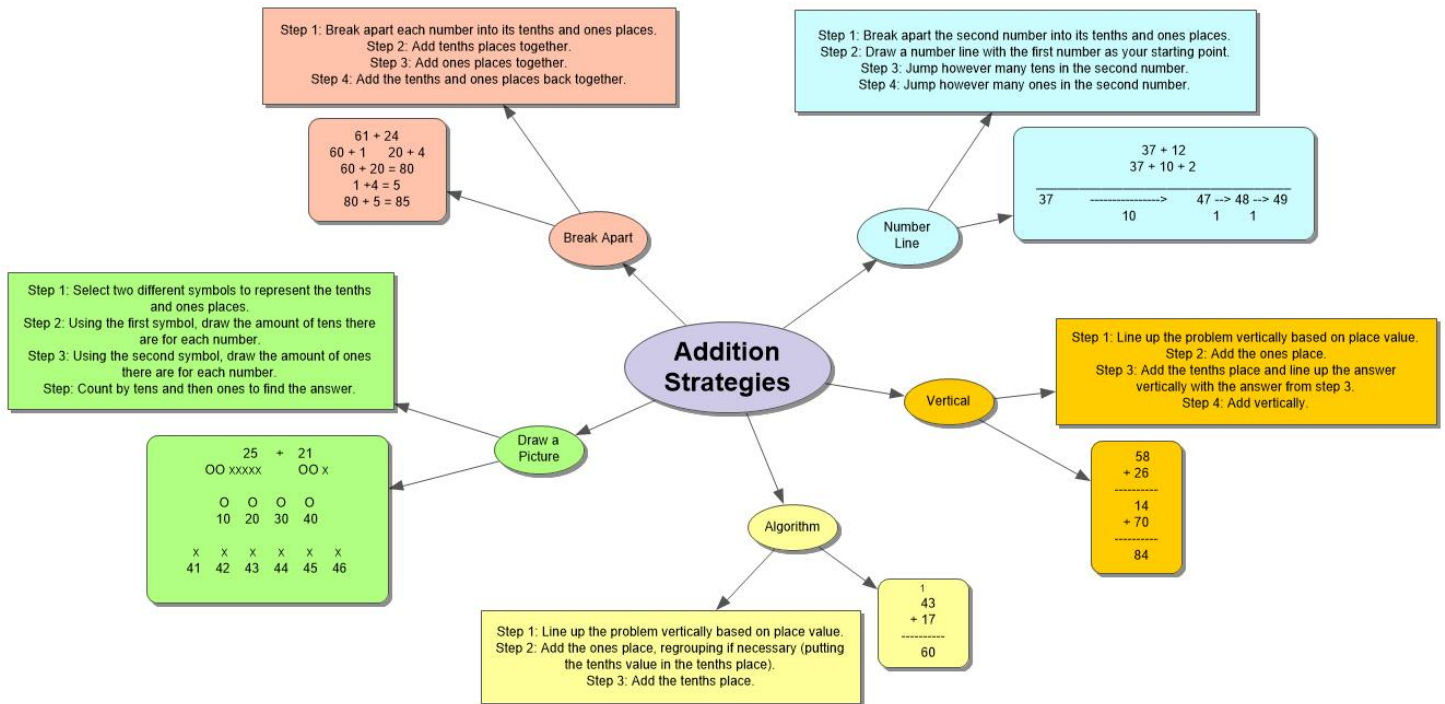
Materials:
- document camera
- projector
- individual dry erase boards

- dry erase markers
- dry erase erasers
- copies of graphic organizer made with Inspiration 9

Procedure:

In preparation for the lesson, I will designate students to pass out dry erase boards, markers, and erasers while I get the document camera and projector ready. I will present the graphic organizer over the document camera, covering up all parts of it except the first strategy to be discussed.

Step 1: Break apart each number into its tenths and ones places.
Step 2: Add tenths places together.
Step 3: Add ones places together.
Step 4: Add the tenths and ones places back together.

61 + 24
60 + 1   20 + 4
60 + 20 = 80
1 + 4 = 5
80 + 5 = 85

Break Apart

Step 1: Break apart the second number into its tenths and ones places.
Step 2: Draw a number line with the first number as your starting point.
Step 3: Jump however many tens in the second number.
Step 4: Jump however many ones in the second number.

37 + 12
37 + 10 + 2

37   -------------->   47 --> 48 --> 49
                 10   1   1

Number Line

Step 1: Select two different symbols to represent the tenths and ones places.
Step 2: Using the first symbol, draw the amount of tens there are for each number.
Step 3: Using the second symbol, draw the amount of ones there are for each number.
Step: Count by tens and then ones to find the answer.

25   +   21
OO xxxxx   OO x

O   O   O   O
10   20   30   40

x   x   x   x   x   x
41   42   43   44   45   46

Draw a Picture

Addition Strategies

Vertical

Step 1: Line up the problem vertically based on place value.
Step 2: Add the ones place.
Step 3: Add the tenths place and line up the answer vertically with the answer from step 3.
Step 4: Add vertically.

58
+ 26

14
+ 70

84

Algorithm

Step 1: Line up the problem vertically based on place value.
Step 2: Add the ones place, regrouping if necessary (putting the tenths value in the tenths place).
Step 3: Add the tenths place.

1
43
+ 17

60

I will explain the first strategy ('break-apart') section of the organizer and go over the two-digit example problem. I will review the solved example and create another to solve on the document camera while explaining how to use the strategy. I will make another problem and have the students raise their hands and tell me the steps to solve the problem using the strategy as I work it over the projector. A final example problem will be given to the students to do individually on their dry erase boards. When they are finished, they will hold up their boards and I will confirm that they did it correctly or help them find their mistake so that they can try again. Once everyone has finished, we will repeat this same process with each strategy. I will pause periodically throughout the lesson to allow the students to ask any questions they may have. At the end of the lesson, I will give each student a copy of the graphic organizer that they can keep and use to reference whenever they are working

on addition problems. I will also share the organizer with them electronically so that they can access the hyperlinked content.

Assessment (How will the students' show you that the objective has been met): (Note: the assessment does not have to be a paper and pencil test)
The students will hold up their dry erase boards as instructed after each completed problem. This will allow me to see if their strategy usage was correct and if they got the correct answer. Correct use of the strategy and correct answers will indicate that they understand how to use the addition strategy with two-digit addition problems.

A Brief Description of The Entire Lesson - Plus Any Additional Information to be Included:
After distribution and preparation of materials, I will begin teaching students the four different strategies they can use to solve multi-digit addition problems based on the graphic organizer presented. We will review the first strategy, solve two-digit examples together, and then the students will solve a two-digit problem on their own so that I can assess their understanding of the strategy. We will do this with each of the four strategies. At the end of the lesson, students will be given copies of the graphic organizer that they can use as a reference when they are working problems in the future.

(I should be able to see and understand your entire lesson by reading this. Remember, Technology is not the lesson. It enhances the lesson)