Wells Elementary School
Grade 2 Curriculum
Math

Grade Level: 2

UNIT/MODULE: Module 1 - Sums and Differences to 100

Focus Skills/Strategies:

- Decomposition of two-digit numbers [Lessons 1-2]
- Addition of two-digit numbers [Lessons 3-5]
- Subtraction of two-digit numbers [Lessons 3, 6-8]

STANDARD(S): 2.OA.1-Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. (See CCLS Glossary, Table 1.)

2.OA.2 Fluently add and subtract within 20 using mental strategies. (See standard 1.OA.6 for a list of mental strategies.) By end of Grade 2, know from memory all sums of two one-digit numbers.

2.NBT.5- 2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

LEARNING TARGETS ("I CAN" STATEMENTS)

I can use addition and subtraction to solve one- and two-step word problems. (2. OA.1)

I can add and subtract the numbers 0-20 using mental strategies.(2.OA.2)

I can use many different strategies to solve addition problems within 100.(2.NBT.5)
I can use many different strategies to solve subtraction problems within 100.(2.NBT.5)

Grade Level: 2

UNIT/MODULE: Module 2- ADDITION AND SUBTRACTION OF LENGTH UNITS

Focus Skills/Strategies:

- Measure (using different tools & units) and compare lengths (exactly & approximately/visually)
  - Key lesson: Lesson 6
- Apply understanding to solve word problems involving adding or subtracting lengths
  - Building on addition and subtraction from Module 1

STANDARD(S):

CCSS.MATH.CONTENT.2.MD.A.1
Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

CCSS.MATH.CONTENT.2.MD.A.2
Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.

CCSS.MATH.CONTENT.2.MD.A.3
Estimate lengths using units of inches, feet, centimeters, and meters.

CCSS.MATH.CONTENT.2.MD.A.4
Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

CCSS.MATH.CONTENT.2.MD.B.5
Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

CCSS.MATH.CONTENT.2.MD.B.6
Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.

LEARNING TARGETS ("I CAN" STATEMENTS)

I can measure the length of an object.(MD.A.1)

I can choose which tool to use when measuring the length of an object.(MD.A. 1)

I can measure the length of an object twice using different units of measure.(MD. A. 2)

I can describe how two measurements of the same object relate to the units I used to measure them.(MD. A. 2)

I can estimate the lengths of objects using inches, feet,
centimeters, and meters.(MD. A. 3)

I can measure two or more objects to find out how much longer one object is than the other.(MD. A. 4)

I can use addition and subtraction within 100 to solve word problems involving measurement.(MD. B. 5)

I can use drawings and equations with symbols for the unknown number to help me solve word problems about measurement. (MD. B. 5)

I can show whole numbers as lengths on a number line.(MD. B. 6)

I can show sums and differences on a
number line.(MD. B. 6)

Grade Level: 2

UNIT/MODULE: Unit 3- Module 3-PLACE VALUE, COUNTING, AND COMPARISON OF NUMBERS TO 1,000

Focus Skills/Strategies:

- Counting [Lessons 1-15]
    - Place value
    - How to count to a number
    - How to count from one number to another number
    - Counting ten or more of a unit
    - Different forms of a number (standard form or base-ten numeral, word form or number name, expanded form, unit form)
- Comparing [Lessons 16-18]
    - Greater than, less than, equal
- Increasing/decreasing by 1, 10, and 100 [Lessons 19-21]
    - “1, 10, 100 more” and “less”

STANDARD(S):
CCSS.MATH.CONTENT.2.NBT.A.1

Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:

CCSS.MATH.CONTENT.2.NBT.A.1.A

100 can be thought of as a bundle of ten tens — called a "hundred."

CCSS.MATH.CONTENT.2.NBT.A.1.B

The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).

CCSS.MATH.CONTENT.2.NBT.A.2

Count within 1000; skip-count by 5s, 10s, and 100s.

CCSS.MATH.CONTENT.2.NBT.A.3

Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.

CCSS.MATH.CONTENT.2.NBT.A.4

Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.

CCSS.MATH.CONTENT.2.NBT.B.8

Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.

LEARNING TARGETS ("I CAN" STATEMENTS)

I understand that a 3-digit number tells me the amount of hundreds, tens, and ones in a number.(NBT. A. 1)

I know a group of ten 'tens' is called a hundred.(NBT. A. 1)

I can explain what the numbers 100-900 represent.(NBT. A. 1)

I can count within 1,000. (NBT. A.2)

I can skip count by 5's. (NBT. A .2)

I can skip count by 10's. (NBT. A. 2)

I can skip count by 100's. (NBT. A. 2)

I can read and write numbers to 1,000. (NBT.3)

I can write numbers in base-ten numerals. (NBT.3)

I can write numbers in number name form. (NBT.3)

I can write numbers in expanded form. (NBT.3)

I can write numbers in base-ten numerals, number names, and expanded form. (NBT.3)

I can tell what the numbers in the ones place, the tens place, and the hundreds place mean. (NBT.4)

NBT: Numbers and Operations in Base Ten

I can compare two three-digit numbers using >, <, and =. (NBT.4)

I can mentally find 10 more than any number between 100-900. (NBT.8)

I can mentally find 10 less than any number between 100-900. (NBT.8)

I can mentally find 100 more than any number between 100-900. (NBT.8)

I can mentally find 100 less than any number between 100-900. (NBT.8)

Grade Level: 2

UNIT/MODULE: Unit 4- Module 4-Addition and Subtraction Within 200 with Word Problems to 100

Strategy [Lesson(s)]	**Addition**	**Subtraction**	**Key Ideas/Notes**

Place value (Common units) [Lessons 2, 6 and on]	26 + 30 = **20** + 6 **+ 30** = **20 + 30** + 6 = 50 + 6 = 56 35 + 26 = (30 + **5**) + (20 + **6**) = 30 + 20 + (**5 + 6**) = 30 + 20 + **11** = 30 + 20 + **10 + 1** = 60 + 1 = 61	56 - 30 = **50** + 6 **- 30** = **50 - 30** + 6 = 20 + 6 = 26 46 - 18 = 40 + **6** - 10 **- 8** = 40 - 10 + **6 - 8** = 30 + **10** - 10 + **6 - 8** = 30 - 10 + **10 + 6 - 8** = 30 - 10 + (**16 - 8**) = 20 + 8 = 28	● Addition and subtraction key ideas ● Basis for vertical form (standard algorithms)
Make multiple of 10 [Lesson 4]	28 + 36 = **28** + 34 **+ 2** = **28 + 2** + 34 = 30 + 34 = 64	78 - 39 = **78** - 30 **- 8** - 1 = **78 - 8** - 30 - 1 = 70 - 30 - 1 = 39	● Addition (and subtraction) key ideas
In parts, method 1 (“The arrow way”) [Lessons 2-3]	19 + 32 = **19 + 30** + 2 = 49 + 2 = 51	90 - 51 = **90 - 50** - 1 = 40 - 1 = 39	● Use arrows or number line
In parts, method 2 [Lesson 3]	19 + 29 = **19 + 30** - 1 = 49 - 1 = 48	90 - 39 = **90 - 40** + 1 = 50 + 1 = 51	● Use number line
Count on [Lesson 2]		56 - 30 = __ → 30 + __ = 56 → 30 + 20 + 6 = 56 → 56 - 30 = 26	● Subtraction as addition with unknown addend ● Use (empty) number line (Module 3 Lesson 9)
Compensation [Lesson 4]		34 - 28 = (34 **+ 2**) - (28 **+ 2**) = 36 - 30	● Show simple case with linking cubes ● Use tape diagram

STANDARD(S):

2.NBT.B.5 - Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

2.NBT.B.8 - Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.

2.NBT.B.9 - Explain why addition and subtraction strategies work, using place value and the properties of operations.

2.NBT.B.7 - Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three- digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

2.OA.A.1 - Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

2.NBT.B.6 - Add up to four two-digit numbers using strategies based on place value and properties of operations.

LEARNING TARGETS ("I CAN" STATEMENTS)

I can use many different strategies to solve addition problems within 100. (NBT.5)

I can use many different strategies to solve subtraction problems within 100. (NBT.5)

I can use strategies based on place value and the properties of operations to solve word problems. (NBT.5)

I can decide if my answers make sense and are reasonable using mental math and estimation. (NBT.5)

I can mentally find 10 more than any number between 100-900. (NBT.8)

I can mentally find 10 less than any number between 100-900. (NBT.8)

I can mentally find 100 more than any number between 100-900. (NBT.8)

I can mentally find 100 less than any number between 100-900. (NBT.8)

I can explain why addition and subtraction strategies work. (NBT.9)

I can use strategies based on place value and the properties of operations to solve addition problems. (NBT.7)

I can add and subtract up to 1,000. (NBT.7)

I know that when adding or subtracting I must add or
subtract the ones with the ones, the tens with the tens, and the hundreds with the hundreds. (NBT.7)

I can compose or decompose a ten when adding or

subtracting. (NBT.7)

I can use addition and subtraction to solve one- and two-step word problems. (OA.1)

I can solve word problems that involve adding to, taking from, putting together, comparing, and taking apart. (.OA.1)

I can use a symbol for the unknown number in a word problem.(OA.1)

I can use strategies based on place value and the properties of operations to solve addition problems. (NBT.6)

I can add up to four 2-digit numbers. (NBT.6)

Grade Level: 2

UNIT/MODULE: Unit 5 / Module 5- Addition and Subtraction Within 1,000 with Word Problems to 100

Focus Skills/Strategies:
Summary:

Strategy [Lesson(s)]	**Addition**	**Subtraction**	**Key Ideas/Notes**
Place value (Common units) [Lessons 2, 8 and on]	450 + 300 = **400** + 50 **+ 300** = **400 + 300** + 50 = 700 + 50 = 750	582 - 300 = **500** + 82 **- 300** = **500 - 300** + 82 = 200 + 82 = 282	● Addition and subtraction key ideas ● Basis for vertical form (standard algorithms)
Make multiple of 100 [Lessons 3-5]	280 + 230 = **280** + 200 **+ 20** + 10 = **280 + 20** + 200 + 10 = 300 + 200 + 10 = 510	780 - 390 = **780** - 300 **- 80** - 10 = (**780 - 80**) - 300 - 10 = 700 - 300 - 10 = 390	● Addition and subtraction key ideas

In parts, method 1 ("The arrow way") [Lessons 2-4]	450 + 300 = 450 + 100 + 100 + 100 450 $\xrightarrow{+100}$ 550 $\xrightarrow{+100}$ 650 $\xrightarrow{+100}$ 750 = 750 280 + 230 = 280 + 200 + 30 280 $\xrightarrow{+200}$ 480 $\xrightarrow{+30}$ 510 = 510	582 - 300 = 582 - 100 - 100 - 100 582 $\xrightarrow{-100}$ 482 $\xrightarrow{-100}$ 382 $\xrightarrow{-100}$ 282 = 282 780 - 390 = 780 - 300 - 50 - 30 - 10 780 $\xrightarrow{-300}$ 480 $\xrightarrow{-50}$ 430 $\xrightarrow{-30}$ 400 $\xrightarrow{-10}$ 390 = 390	● Use arrows or number line
In parts, method 2	120 **+ 190** = 120 **+ 200 - 10** = 320 - 10 = 310	780 **- 390** = 780 **- 400 + 10** = 380 + 10 = 390	● Use number line
Count on [Lessons 2 & 18]		582 - 300 = __ → 300 + __ = 582 → 300 + 200 + 82 = 582 → 582 - 300 = 282	● Subtraction as addition with unknown addend ● Use (empty) number line (Module 3 Lesson 9)
Compensation [Lessons 6 & 18]		780 - 390 = (780 + 10) - (390 + 10) = 790 - 400 = 390	● Show simple case with linking cubes (Module 4 Lesson 4) ● Use tape diagram

STANDARD(S):

CCSS.MATH.CONTENT.2.NBT.B.7

Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

CCSS.MATH.CONTENT.2.NBT.B.8

Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.

CCSS.MATH.CONTENT.2.NBT.B.9

Explain why addition and subtraction strategies work, using place value and the properties of operations.1

LEARNING TARGETS ("I CAN" STATEMENTS)

I can compose or decompose a ten when adding or subtracting. (2.NBT.7)

I know that when adding or subtracting I must add or subtract the ones with the ones, the tens with the tens, and the hundreds with the hundreds. (2.NBT.7)

I can add and subtract up to 1,000. (2.NBT.7)

I can mentally find 10 more than any number between 100-900. (2.NBT.8)
I can mentally find 10 less than any number between 100-900. (2.NBT.8)
I can mentally find 100 more than any number between 100-900. (2.NBT.8)
I can mentally find 100 less than any number between 100-900. (2.NBT.8)

I can explain why addition and subtraction strategies work. (2.NBT.9)

Grade Level: 2

UNIT/MODULE: Module 6 - Foundations of Multiplication and Division

Focus Skills/Strategies:

- Addition of equal groups (sum of equal addends): $n + n + \ldots + n$
- Progression of learning:
  - objects in equal groups → objects in array → squares in rectangle
  - groups ↔ rows or columns
- To prep students for Grade 3:
  - Multiplication will be *shorthand* for addition of equal groups
    - Example: $7 \times 2 = 2 + 2 + 2 + 2 + 2 + 2 + 2$ (total of 7 groups of 2)
  - Area of rectangle: counting total number of unit squares that fit inside rectangle

STANDARD(S):

CCSS.MATH.CONTENT.2.OA.A.1

Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.1

CCSS.MATH.CONTENT.2.OA.C.3

Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

CCSS.MATH.CONTENT.2.OA.C.4

Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

CCSS.MATH.CONTENT.2.G.A.1

Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.1 Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

CCSS.MATH.CONTENT.2.G.A.2

Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.

LEARNING TARGETS ("I CAN" STATEMENTS)

I can use addition and subtraction to solve one- and two-step word problems. (2.OA.1)
I can solve word problems that involve adding to, taking from, putting together, comparing, and taking apart. (2.OA.1)

I can decide if a group of objects has an even number or an odd number. (2.OA..3)
I can count by 2's or pair objects to help me count even numbers or odd numbers. (2.OA.3)
I can write an equation to show that an even number is the sum of two equal numbers. (2.OA.3)

I can use addition to find the total number of objects in an array. (2.OA.4)
I can write an equation that shows the total sum of the objects in an array. (2.OA.4)
I can write an equation that shows the total sum of the objects in an array. (2.OA.4)

I can split a rectangle into rows and columns with equal-sized squares and count the number of squares. (2.G.2-3)

Grade Level: 2

UNIT/MODULE: Module 7 - Problem Solving with Length, Money, and Data

Focus Skills/Strategies:
Relationship between measurement units and values:

STANDARD(S):

2.MD.D.10 - Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put- together, take-apart, and compare problems using information presented in a bar graph.

2.MD.C.8 - Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

2.NBT.B.5 - Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

2.MD.A.1 - Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

2.MD.A.2 - Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.

2.MD.A.3 - Estimate lengths using units of inches, feet, centimeters, and meters.

2.MD.A.4 - Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

2.MD.B.5 - Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

2.MD.B.6 - Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.

2.MD.D.9 - Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.

LEARNING TARGETS ("I CAN" STATEMENTS)

I can measure the length of an object. (2.MD.A.1)

I can choose which tool to use when measuring the length of an object. (2.MD.A.1)

I can measure the length of an object twice using different units of measure. (2.MD.A.2)
I can describe how two measurements of the same object relate to the units I used to measure them. (2.MD.A.2)

I can estimate the lengths of objects using inches, feet,
centimeters, and meters. (2.MD.A.3)

I can measure two or more objects to find out how much longer one object is than the other. (2.MD.A.4)

I can use drawings and equations with symbols for the unknown number to help me solve word problems about measurement. (2.MD.B.5)

I can show sums and differences on a number line. (2.MD.B.6)

I can solve word problems using dollars, quarters, dimes, nickels, and pennies. (2.MD.C.8)
I can use the $ and ¢ signs correctly. (2.MD.C.8)

I can measure the lengths of several objects to the nearest whole unit. (2.MD.D.9)

I can draw a picture or a bar graph to show data with up to four categories. (2.MD.D.10)
I can solve simple put-together, take-apart and compare problems using the information in a graph. (2.MD.D.10)

I can use many different strategies to solve addition problems within 100. (2.NBT.B.5)
I can use many different strategies to solve subtraction problems within 100. (2.NBT.B.5)
I can use strategies based on place value and the properties of operations to solve word problems. (2.NBT.B.5)
I can decide if my answers make sense and are reasonable using mental math and estimation. (2.NBT.B.5)

Grade Level: 2

UNIT/MODULE: Module 8 Time, Shapes, and Fractions as Equal Parts of Shapes

Focus Skills/Strategies:

- Geometry: attributes, classification, construction/drawing, and compositions of shapes [Lessons 1-6]
- Fractions: “equal” partitions of shapes [Lessons 7-12]

- Telling time: half, quarter-partitions of circle [Lessons 13-16]

STANDARD(S):

CCSS.MATH.CONTENT.2.G.A.1
Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.1 Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

CCSS.MATH.CONTENT.2.G.A.3
Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

CCSS.MATH.CONTENT.2.MD.C.7
Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

LEARNING TARGETS ("I CAN" STATEMENTS)

I can recognize and draw shapes that have certain attributes. (G.1)

I can name triangles, quadrilaterals, pentagons, hexagons, and cubes. (G.1)

I can split circles and rectangles into two, three, and four equal shares. (G.2-3)

I can use the words halves, thirds, fourths, quarters, half of, third of, fourth of, and quarter of to describe partitioned shapes.(G.2-3)

I can split a rectangle into rows and columns with equal-sized squares and count the number of squares. (G.2-3)

I can tell and write time to the nearest 5 minutes. (2.MD.7)
I can tell time using digital and analog clocks. (2.MD.7)
I can use a.m. and p.m. when telling and writing time. (2.MD.7)