1st Grade Mathematics Curriculum

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## Unit 1

| Subject: Mathematics | Grade: 1 | Unit Name: Unit 1: Relating Addition and Subtraction |
| :--- | :--- | :--- |
| Total Number of Lessons: 6 | Unit Time Frame (days): 33 |  |
| NJSLS |  |  |
| 1.OA.A.1, 1.OA.B.3, 1.OA.B.4, 1.OA.C.5, 1.OA.C.6, SMP 1-8 |  |  |
| Students will be able to independently use their learning to: |  |  |
| - Count on to add and subtract. |  |  |
| - Use doubles and doubles plus one facts. |  |  |
| - Add in any order. |  |  |
| - Find missing addends. |  |  |
| - Find number partners for 10. |  |  |
| - Develop their understanding of the relationship between addition and subtraction. |  |  |
| - Develop fluency for addition and subtraction within 10. |  |  |
| - Solve addition and subtraction word problems within 10. |  |  |
| - Subtract to compare. |  |  |
| - Tell if an equation is true or false. |  |  |

## Understandings:

- Mathematicians understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
- Mathematicians apply properties of operations and the relationship between addition and subtraction.
- Mathematicians solve for an unknown.
- Mathematicians use effective strategies to solve addition and subtraction problems.


## Performance Tasks:

- Use objects, drawings and equations to represent and solve addition problems within 10.
- Use the strategy make a model to solve "adding to" and "putting together" addition problems.
- Model and record all the ways to put together numbers within 10 using tens frames and number bonds.
- Compare the way numbers for 10 are shown in different models.
- Describe how an equation represents a model of number partners for 10.
- Observe that the order of addends does not change the total of 10 .
- Use and explain the count on strategy to add.
- Use objects, drawings and equations to represent and solve subtraction problems within 10.
- Compare pictorial groups to understand subtraction.
- Identify how many are left when subtracting all or 0 .
- Use and explain the count back strategy to subtract.
- Model and compare groups to show the meaning of subtraction.
- Model and record all the ways to take apart numbers within 10.
- Analyze word problems to determine how to solve them.
- Show and describe the actions in word problems using models and symbols.
- Use equation frames to make sense of stories being told in problems with the change unknown.
- Describe efficient strategies and tools to solve word problems within 10.
- Identify, write, and use related addition and subtraction equations to solve subtraction problems.
- Generate groups of related addition and subtraction equations, called "fact families."

Core Instructional and Supplemental Materials, Assessments, Pacing Guide
Materials and assessments are provided by i-Ready.
Unit 1: 1st Grade Math CTSD 2023-24

## Interdisciplinary Connections:

- LA: Read Aloud Ten Black Dots by Donald Crews. Review representing numbers 1-10 with counters. (RI.1.1)

Computer Science \& Design Thinking (8.1 or 8.2)

- Use the computer to perform math tasks in i-Ready 'My Path' (8.1.2.CS.1)
- Solve given problems in a variety of ways (9.4.2.CT.3)


## Accommodations:

Accommodations-CTSD 2023

## Unit 2

| Subject: <br> Mathematics | Grade: <br> 1 | Unit Name: <br> Unit 2: Addition and Subtraction within 20 |
| :--- | :--- | :--- |
| Total Number of |  |  |
| Lessons: | Unit Time Frame (days): <br> 6 | 28 |
| NJSLS <br> 1.NBT.B.2a, 1.NBT.B.2b, 1NBT.B.2c, 1.OA.A.1, 1.OA.A.2, 1.OA.B.3, 1.OA.C.6, 1.MD.C.4, SMP 1-6 |  |  |

## Students will be able to independently use their learning to:

- Name and write teen numbers.
- Make a ten to add and subtract, understanding that 10 is a useful benchmark that can make adding and subtracting easier.
- Find totals greater than 10.
- Use doubles facts within 20.
- Use doubles facts to solve near doubles facts within 20.
- Add three numbers.
- Find the unknown number in an equation.
- Use addition and subtraction within 20 to solve word problems.


## Understandings:

- Mathematicians use effective strategies to solve addition and subtraction problems.
- Mathematicians relate addition and subtraction to solve word problems.


## Performance Tasks:

- Show doubles as two equal groups
- Find doubles facts within 20 .
- Show how near doubles are related to double facts.
- Choose the strategies "count on 1,2 , or 3 ", "doubles", "doubles plus 1 ", "doubles minus 1 ", or make a ten when adding two numbers within 20 .
- Make connections between strategies by describing how two strategies are alike and different.
- Demonstrate understanding that 10 can be thought of as a bundle or group of 10 ones called a 10.
- Compose and decompose a teen number as a ten and some ones using objects, pictures, words and numbers.
- Apply the strategy of decomposing a single-digit number to get to 10 when subtracting it from a teen number.
- Describe how to use number partners for 10 to subtract a number in parts from a teen number.
- Find the total of three addends using strategies such as finding the number partners for 10 or using doubles facts by grouping any two addends.
- Write addition equations with three addends to represent problems.
- Read and interpret word problems in order to write equations with three addends.


## Core Instructional and Supplemental Materials, Assessments, Pacing Guide

Materials and assessments are provided by i-Ready.
Unit 2: 1st Grade Math CTSD 2023-24

## Interdisciplinary Connections:

- LA: Read Aloud: Two of Everything by Lily Toy Hong. Introduce concept of doubles. (RL.1.9)
- LA: Read Aloud: Madeline by Ludwig Bemelmans. Reinforce concept of doubles. (RL.1.1)

Computer Science \& Design Thinking (8.1 or 8.2)

- Use the computer to perform math tasks in i-Ready 'My Path' (8.1.2.CS.1)

Career Readiness, Life Literacies \& Key Skills (9.1, 9.2 or 9.4)

- Solve given problems in a variety of ways (9.4.2.CT.3)


## Accommodations:

Accommodations-CTSD 2023

## Unit 3

| Subject: <br> Mathematics | Grade: <br> 1 | Unit Name: <br> Unit 3: Solving Word Problems and Making Comparisons |
| :--- | :--- | :--- |
| Total Number of <br> Lessons: <br> 5 | Unit Time Frame (days): <br> 23 |  |
| NJSLS <br> 1.OA.A.1, 1.OA.A.2, 1.OA.A.6, 1.OA.C.b, 1.OA.B.4, 1.OA.D.7, 1.MD.C.4, SMP 1-4 |  |  |

## Students will be able to independently use their learning to:

- Show numbers as tens.
- Count on a 120 chart.
- Show numbers as tens and ones.
- Compare numbers.
- Add and subtract within 20.
- Choose strategies to solve equations.
- Collect and compare data.
- Tell time to the hour and half hour.


## Understandings:

- Mathematicians use place value to model, read and write numbers to 120 .
- Mathematicians use place value to compare numbers.
- The ability to tell time helps develop our sense of time management, responsibility and independence.
- Mathematicians use graphs and charts to organize, represent and interpret data.


## Performance Tasks:

- Use models and write to represent equivalent forms of tens and ones through 120.
- Use objects, pictures, and numbers to represent numbers or quantities to 100.
- Count, read, and write numerals to represent a number of 100-120 objects.
- Solve problems using the strategy make a model.
- Model and compare two-digit numbers using symbols >, = and <.
- Identify numbers that are 10 less or 10 more than a given number.
- Demonstrate understanding that the digits in a 2-digit number represent amounts of ten and ones.
- Demonstrate understanding that 10 can be thought of as a bundle or group of 10 ones called a 10.
- Solve and explain two-digit addition problems using the strategy draw a picture.
- Write equations to represent the known and missing numbers in word problems that are heard or read.
- Explain how to choose strategies to solve equations.
- Write related equations to demonstrate understanding of fact families.
- Use related equations to help check work.
- Use concrete and visual models to represent compare situations.
- Solve "difference unknown" compare problems to find how many more or fewer.
- Solve "bigger unknown" and "smaller unknown" compare problems to find an unknown quantity.
- Use related addition and subtraction equations to solve comparison problems.
- Organize, represent and interpret data with 3 categories.
- Tell and write time in hours and half-hours using analog and digital clocks.


## Core Instructional and Supplemental Materials, Assessments, Pacing Guide

Materials and assessments are provided by i-Ready.
Unit 3: 1st Grade Math CTSD 2023-24

## Interdisciplinary Connections:

- LA: Read Aloud Clocks and More Clocks by Pat Hutchins. Use to introduce telling time. (RL.1.1)


## Computer Science \& Design Thinking (8.1 or 8.2)

- Use the computer to perform math tasks in i-Ready 'My Path' (8.1.2.CS.1)

Career Readiness, Life Literacies \& Key Skills (9.1, 9.2 or 9.4)

- Solve given problems in a variety of ways (9.4.2.CT.3)


## Accommodations:

Accommodations-CTSD 2023

## Unit 4

| Subject: Math | Grade: 1 | Unit Name: Unit 4: Using Tens and Ones to Organize and Count |
| :--- | :--- | :--- |
| Total Number of Lessons: <br> 3 | Unit Time Frame (days): <br> 18 days |  |
| NJSLS <br> 1.NBT.B.2, 1.NBT.B.2a, 1.NBT.B.2c, 1.NBT.A.1, 1.NBT.C.5, 1. NBT. B. 3 |  |  |
| Students will be able to independently use their learning to: <br>  <br> • Recognize that in a two digit number, the digit in the tens place represents the number of tens <br> - Recognize the number partners for 10 and show them on models, such as a 10s frame or number book <br> - Use the count on strategy to add <br> - Use the count back strategy to subtract |  |  |

## Understandings:

- Add within 100 , including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 20 , using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction
- Understand that in adding two-digit numbers, one adds tens and ones, ones and ones, and sometimes it is necessary to compose a ten.
- Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
- Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction
- Compare two two-digit numbers based on the meaning of the tens and ones digits, recording the results of comparisons with the symbols >, = and <.


## Performance Tasks:

- Organize concrete objects by tens and ones
- After organizing objects, count them by counting by 10 s and then counting by 1 s
- Make connections between concrete objects and visual representations of tens and ones
- Identify, write, and use related addition and subtraction equations to solve subtraction problems


## Core Instructional and Supplemental Materials, Assessments, Pacing Guide

Materials and assessments are provided by i-Ready.


## Unit 5

| Subject: Math | Grade: 1 | Unit Name: Unit 5: Operations With Tens and Ones |
| :---: | :---: | :---: |
| Total Number of Lessons: 4 | Unit Time Frame (days):$23$ |  |
| NJSLS <br> 1.NBT.C.4, 1.NBT.C. 6 |  |  |
| Students will be able to independently use their learning to: <br> - Students will use what they know about tens and ones to add or subtract tens from any number <br> - When adding two-digit numbers, students can add tens to tens and ones to ones <br> - Students will cross a ten when adding <br> - Breaking apart and putting together numbers in ways that are helpful to the learner |  |  |
| Understandings: <br> - Add and subtract multip <br> - When adding two dig | iples of 10 numbers | ples of 10 tens must be formed |

## Performance Tasks:

- Add within 100 , including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 20 , 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 and explain the reasoning used.
- Understand that in adding two-digit numbers, one adds tens and ones, ones and ones, and sometimes it is necessary to compose a ten.


## Core Instructional and Supplemental Materials, Assessments, Pacing Guide

Materials and assessments are provided by i-Ready.
Unit 5: 1st Grade Math CTSD 2023-24

## Interdisciplinary Connections:

- LA- Read aloud "Mission: Addition" by Loreen Leedy.Reinforce adding two digit numbers (RI.1.1.)


## Computer Science \& Design Thinking (8.1 or 8.2)

- 8.1.2.CS. 1 Use the computer to perform math tasks in i-Ready 'My Path' (8.1.2.CS.1)

Career Readiness, Life Literacies \& Key Skills (9.1, 9.2 or 9.4)

- 9.4.2.CT.3: Use a variety of types of thinking to solve problems


## Accommodations:

Accommodations-CTSD 2023

## Unit 6

| Subject: Math | Grade: 1 | Unit Name: Unit 6: Geometry and Measurement |
| :--- | :--- | :--- |
| Total Number of Lessons: <br> 5 | Unit Time Frame (days): <br> 28 |  |
| NJSLS <br> 1.G.A.1, 1.G.A.2., 1.G.A.3., 1.MD.B.3., 1.MD.A.1, 1.MD.A.2. |  |  |
| Students will be able to independently use their learning to: <br> $\bullet \quad$ Students will describe how long something is by comparing it to other objects |  |  |

- Describe the time of day by reading a clock
- Compose compound shapes, describe shapes, and see smaller shapes inside larger shapes
- Knowing that two parts of a whole is called halves
- Knowing that four parts of a whole is called quarters


## Understandings:

- Telling time to the hour and half hour
- Making two and three dimensional shapes as well as new shapes formed from the original shapes
- Dividing shapes into halves and fourths


## Performance Tasks:

- Order three objects by length; compare the lengths of two objects indirectly by using a third object.
- Reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others, use appropriate tools strategically, and attend to precision.
- Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.
- Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.
- Compose two-dimensional shapes (rectangles, squares, trapezoids, triangle, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.
- Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.


## Core Instructional and Supplemental Materials, Assessments, Pacing Guide <br> Materials and assessments are provided by i-Ready. <br> Unit 6: 1st Grade Math CTSD 2023-24

## Interdisciplinary Connections:

- LA- Read aloud "Inch by Inch" by Leo Lionni. Reinforce measurement (RI.1.1.)
- Art-Use the story above to have students draw, color, and cut out an animal of their choosing. Students will go around the room and measure the animals (1.5.2.Cr1b)
- Physical Ed- Bean Bag Hop and Toss Shapes. Different shapes in a hopscotch format on the ground. Wherever he beanbag lands the student will say the name of the shape and hop to that spot. ( 2.2.2.PF.2)


## Computer Science \& Design Thinking (8.1 or 8.2)

- 8.1.2.CS. 1 Use the computer to perform math tasks in i-Ready 'My Path'

Career Readiness, Life Literacies \& Key Skills (9.1, 9.2 or 9.4)

- 9.4.2.CT.3: Use a variety of types of thinking to solve problems


## Accommodations:

Accommodations-CTSD 2023

