Kindergarten Math Unit 2

Content Area: **Mathematics**
Course(s):
Time Period: **Trimester 2**
Length: **59 days**
Status: **Published**

Brief Summary of Unit

In this unit, students will use fingers, pictures, or manipulatives to subtract two numbers within 5 and count to find how many are left. Children will understand that subtracting from a number results in less (except when subtracting zero). Students will also tell and solve take-away story problems. Students will identify the plus sign (+) as a symbol that indicates addition and the minus (-) sign as a symbol that indicates subtraction. Students will determine whether a story problem calls for addition or subtraction and solve addition and subtraction story problems using objects or pictures.

Next, students will count up to 10 objects and write or show a number to represent how many. Students will use one- to -one correspondence and number words in sequential order. Students will recognize and write numbers 6 to 10. They will also understand that the last number said tells the number of objects. Students will then identify whether the number of objects (to 10) in one group is greater than, less than or equal to the number in another group. Students will compare two numbers from 1-10.

In this unit, students will compose shapes from two or more two-dimensional or three dimensional shapes. Students will describe shapes composed of two or more two- or three-dimensional shapes.

In addition, students will recognize that a number can be broken into smaller parts and identify number partners to 10 using drawings or manipulatives. Students will find the second number partner for 10 when given the first using drawings or manipulatives. Students will understand the equal sign and represent number partners for 10 with equations and decompose 10 into partners using objects or drawings.

Students will count groups of up to 20 objects and read and write numbers from 11-20. Next students will count to 100 by 1s and 10s. Finally students will count on from a given number that is less than 100.

Revision Date: August 2024

Essential Questions

Essential Questions:

- How can I show addition and subtraction with objects, fingers, and drawings?

- How can I use strategies to help solve addition and subtraction equations quickly?
- To what extent are addition and subtraction similar and different?
- How can we explore addition and subtraction using objects through joining and separating?

Enduring Understandings:

- Students will understand addition is joining amounts together
- Students will understand subtraction is taking amounts apart
- Students will understand how to solve addition and subtraction word problems
- Students will understand how to fluently add and subtract facts to five

Students Will Know/Students Will be Skilled At

Students will know:

- How to use fingers, pictures, or manipulatives to subtract two numbers within 5 and count to find how many are left.
- How to tell and solve take-away story problems.
- How to identify the plus sign (+) as a symbol that indicates addition and the minus (-) sign as a symbol that indicates subtraction.
- How to determine whether a story problem calls for addition or subtraction and solve addition and subtraction story problems using objects or pictures.
- How to count up to 10 objects and write or show a number to represent how many.
- How to use one- to -one correspondence and number words in sequential order.
- How to recognize and write numbers 6 to 10
- How to identify whether the number of objects (to 10) in one group is greater than, less than or equal to the number in another group.
- How to compare two numbers from 1-10.
- How to compose shapes from two or more two-dimensional or three dimensional shapes.
- How to describe shapes composed of two or more two- or three-dimensional shapes.
- How to recognize that a number can be broken into smaller parts and identify number partners to 10

using drawings or manipulatives.

- How to find the second number partner for 10 when given the first using drawings or manipulatives.
- How to count groups of up to 20 objects and read and write numbers from 11-20.
- How to count to 100 by 1s and 10s.
- How to count on from a given number that is less than 100.

Students will be skilled at:

- Using fingers, pictures, or manipulatives to subtract two numbers within 5 and count to find how many are left.
- Telling and solving take-away story problems.
- Identifying the plus sign (+) as a symbol that indicates addition and the minus (-) sign as a symbol that indicates subtraction.
- Determining whether a story problem calls for addition or subtraction and solve addition and subtraction story problems using objects or pictures.
- Counting up to 10 objects and writing or showing a number to represent how many.
- Using one- to -one correspondence and number words in sequential order.
- Recognizing and writing numbers 6 to 10
- Identifying whether the number of objects (to 10) in one group is greater than, less than or equal to the number in another group.
- Comparing two numbers from 1-10.
- Composing shapes from two or more two-dimensional or three dimensional shapes.
- Describing shapes composed of two or more two- or three-dimensional shapes.
- Recognizing that a number can be broken into smaller parts and identifying number partners to 10 using drawings or manipulatives.
- Finding the second number partner for 10 when given the first using drawings or manipulatives.
- Counting groups of up to 20 objects and read and write numbers from 11-20.
- Counting to 100 by 1s and 10s.
- Counting on from a given number that is less than 100.

Learning Plan

*As an opening to each math lesson, the instructor can use these different routines

- Number Talks- District Created Resource
- Quick Images- This routine helps students to subitize, or "instantly see how many". The teacher should briefly show an image of a quantity (using dot cards, ten frames, etc.). Students are then asked to identify the quantity they saw and to describe the image.
- Number Strings- This routine helps to build students' mental math capabilities. The teacher writes a problem horizontally on the board in a whole group or small setting. The students mentally solve the problem and share with the whole group how they solved it. They must justify and defend their reasoning. The teacher records the students' thinking in an open number line and poses extended questions to draw out deeper understanding for all. The teacher can have students share other students' strategies to the whole group or with turn and talk. Eventually provide a few number sentences on the board to solve within 20 and model how you can use mental math strategies to solve them in a snap just like they would on a fact test, then let them try solving in a snap as you point to each number sentence.
- Buzz- Have students stand in a large circle around the room. Students will count around the room however, one number will be the "Buzz Number". When a student says the "Buzz Number" that child is "out" and will sit down, and the counting sequence begins again. Keep playing until there is only one student left.
- Partner Counting- The first partner will tell their partner a number to start counting from. The partner will start counting- using hand signals, the first partner can signal to partner to stop counting, begin counting backward and then forward again. (Hand signals: Fist = Stop, Pointing up = Count Up, Pointing Down= Count Down) They can count for 30 seconds and then switch partner roles.
- Counting Around the Room- Have students stand in a large U-Shape around the room (each child should be able to see the board). Have the students count around the room by a particular number. (If counting by 10s, the first person says "17", the next person says "27", the next "37", and so forth). Have students discuss what is happening with the numbers. While the students are counting, the teacher can be writing the numbers on the board as the students say each number for a visual to help with scaffolding and discussion. Take note of the patterns of each place value in the discussions.

1. Kindergartners need to be fluent in adding and subtracting within 5. This is a skill that should be worked on throughout the year utilizing the Ready Math Program and supplemental resources that are located under materials.

2. Subtract within 5- Students will solve take-away subtraction word problems within 5 using pictures or objects, as well as, recognize take-away situations as subtraction problems. Students will be instructed to subtract to find how many are left and tell and solve subtraction story problems within 5. Students will be instructed to use their fingers, pictures and manipulatives to subtract. Students should be instructed to understand that subtracting from a number results in less (except when subtracting 0). Students should be taught to use words such as take away, go away and leave to tell and solve take-away story problems.

a. Complete Lesson 9, Sessions 1-5 (5 days)

b. Building Subtraction within 5:

   i. Allow students to use finger,s pictures or manipulatives to subtract two numbers within 5 and count to find how many are left.

   ii. Act out taking away situations by telling word problems in story form, then model the same situation using counters showing repetition to build fluency.

   iii. Understand that subtracting from a number results in less (except when subtracting 0).

   iv. Model subtraction stories based off of visuals and have students create their own

      1. Pair students up or work in groups to create subtraction stories

   v. Continue to use visuals, manipulatives, fingers, tens frames etc. to build strategies subtracting within 5

c. Vocabulary: subtract, subtraction, take away, less, less than, more, more than, model (verb)

d. Comprehension Check, Lesson Quiz, or Exit Ticket

3. Add and Subtract within 5- Students will understand plus and minus signs. Students should be instructed to add up to 5 and subtract from 5 or less. Instruct students to tell and solve addition and subtraction story problems. Instruct students to read, say, and write, the plus sign and minus sign to represent adding or subtracting. Students should be instructed to use objects and pictures to explain how to solve addition and subtraction. Students should be taught to connect their models to the story problems.

a. Complete Lesson 10, Sessions 1-5 (5 days)

b. Building Subtraction within 5:

   i. Identify the plus sign (+) as a symbol that indicates addition and the minus sign (-) as a symbol that indicates subtraction (___+___=___) and (___-___=___)

   ii. Determine whether a story problem calls for addition or subtraction by acting taking away situations and putting together situations by telling word problems in story form, then model the same situation using counters showing repetition to build fluency.

   iii. Solve addition and subtraction story problems using objects and pictures.

   iv. Match given expressions to models and to story problems and find values of expressions.

   v. Model subtraction stories based off of visuals and have students create their own

      1. Pair students up or work in groups to create addition and subtraction stories

   vi. Continue to use visuals, manipulatives, fingers, tens frames etc. to build strategies subtracting within 5

c. Vocabulary: minus, minus sign (-), plus, plus sign (+), add, subtract, take away, model (noun),

symbol

d. Comprehension Check, Lesson Quiz, or Exit Ticket

Unit 3 Review and Assessment

4. Count, Show, and Write Numbers 6 to 10- Students are introduced to quantities and written numbers six, seven, eight, nine and ten. Students will learn to recognize these quantities in images and on a ten frame. Students will learn proper number formation to write these numbers. Students should be taught to count up to 10 using one-to-one correspondence and number worlds in sequential order. Students should state the number of objects, up to 10, counted in a group arranged in a 10-frame. Students should be instructed to identify and write numbers 6 to 10 to represent a quantity of objects.

a. Complete Lesson 11, Sessions 1-5 (5 days)

b. Counting/Writing Strategies:

   i. Count up to 10 using one-to-one correspondence and number words in sequential order.

   ii. Use ten frames as a tool to count and represent counts to 10

   iii. Recognize and write numbers 6 to 10.

   iv. Provide situations in which the students can recognize that the last number said tells the number of objects.

   v. Count and say one number at a time in order.

   vi. Pair each object with one and only one number name.

   vii. Tag (or cross out) one object at a time to encourage 1:1 correspondence

   viii. Drawing single straight lines to match sets that are the same

   ix. Circle/color sets that show a given amount

   x. Top-down and proper number formation

   xi. Use dot card flashcards 0-5. Flash the image and prompt students “how do you see it?” Have students explain the combinations they see on the card.

c. Vocabulary: count, number, six, seven, eight, nine, ten, zero, one, two, three, four, five, count, number, organize

d. Comprehension Check, Lesson Quiz, or Exit Ticket

5. **Compare within 10**- Students will compare quantities concretely, pictorially, and numerically within 10. Students will compare the sizes of two sets by matching each object in one set to an object in another. Children will use their counting skills to count objects in sets and tell which is greater than, less than, or if the

sets have an equal amount. Instruct students to compare groups of objects (to10) using the terms greater than, less than, and equal to. Students should draw and mark visual models to compare two numbers from 1 to 10.

a. Complete Lesson 12, Sessions 1-5 (5 days)

b. Comparing Strategies

i. Use counters or fingers to model two different amounts; then compare

Ii. Use counters or fingers to model two amounts that are the same; then compare

Iii. Draw lines to match objects one to one; then compare

Iv. Draw more or less than a given set (i.e. if 7 objects are given students draw an amount that is <7 or >7)

V. Circle or color amounts that are greater than, less than, equal to

a. Vocabulary: equal, equal to, greater, greater than, less, less than, more, more than, same, same as, after, before

b. Comprehension Check, Lesson Quiz, or Exit Ticket

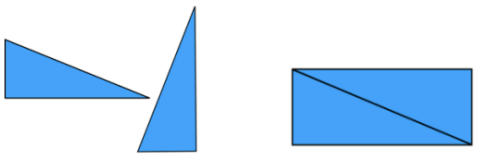
6. **Compose Shapes**- Instruct students to build shapes and put shapes together to form larger shapes. Instruct students to place two or more shapes side by side. Students should be instructed to follow directions to make composite shapes containing multiple two- or three dimensional shapes using drawings or models. Instruct students to name the two-or three dimensional shapes that form a composed shape.

a. Complete Ready Math Lesson 13, Sessions 1-5 (5 days)

b. Possible strategies for building shapes include but are not limited to:

i. Students use play dough or other materials, for instance geoboards, cubes, etc. to make 2D and 3D shapes.

ii. Provide students time to manipulate two or more shapes to create larger shapes and pictures. For example, pose: Using these triangles, can you create a different shape? Possible response: While exploring with triangles, a student flips and turns the triangles to make a rectangle.



i. The above can also be done with three-dimensional shapes.

ii. Students can also combine shapes to build pictures. Pictures can be described by the students using informal geometric terminology. Students will intuitively explore geometric motions (slides, flips, and turns) to create pictures and solve problems. You can start out with completed pictures and have the students move to open outlines.

a. Lesson Vocabulary: compose, circle, hexagon, rectangle, square, triangle, cone, cube, cylinder, prism (rectangular, pyramid (square), sphere, corner, vertex, flat, side, solid, three-dimensional, two-dimensional, build

b. Comprehension Check, Lesson Quiz, or Exit Ticket

7. **Compose and Decompose 10-** Students will focus on the way to make 10 through the composition or decomposition of two numbers. They will show the number pairs for 10 using objects and drawings, be able to name the number pairs and use these number pairs to 10 to solve word problems. Students should be taught to identify and explain ways to break a number into smaller parts using models. Instruct the students to use the terms compose and decompose when finding and naming the number partners for 10.

a. Complete Lesson 14, Sessions 1-5 (5-6 days)

b. Number Pairs to Make 10:

i. Provide opportunities using objects, ten frames, etc. for students to recognize that a number can be broken into smaller parts.

ii. Allow students to use drawings or manipulatives to identify number partners for 10.

iii. Allow students to find the second number partner for 10 when given the first using drawings or manipulatives

iv. Provide opportunities to use (___+___=___) and (___-___=___)

v. Model combinations of 10 by acting out, with manipulatives, using a ten frame and drawing.

vi. Connect the number pairs which equal 10 by images

vii. Use counters within a 10 frame to compose and decompose ways to make 10.

c. Vocabulary: compose, decompose, add, plus, ten, part

d. Comprehension Check, Lesson Quiz, or Exit Ticket

8. **Find the Missing Part of 10-** Students will find the missing part of the number pair which equals 10, while exploring number pairs that make 10. During this lesson students will understand that numbers can be made from two smaller quantities. Instruct students how to interpret and record equations that represent number partners for 10 using the equal sign. The instructor should provide opportunities for students to break 10 into number partners using objects or drawings. Instruct students to find and describe number partners for 10 using lesson vocabulary.

a. Complete Lesson 15, Sessions 1-5 (5 days)

b. Missing addend within the equation

    i. Review ways to make 10

    ii. Use connecting cubes; 10 of each color, to show variety of ways to make 10

        1. Give students an amount- ask them how many more cubes are needed to make 10.

    iii. Use tens frames to show “how many more” are needed to make 10

        1. Draw within tens frame and write the equation to show

    iv. Provide opportunities for students to understand the equal sign and represent number partners for 10 with equations. (___+___=___) and (___-___=___)

    v. Allow students to decompose 10 into number partners using objects or drawings

c. Vocabulary: equal sign (=), equation, add, equal, equal to, plus sign (+), both, in common

d. Comprehension Check, Lesson Quiz, or Exit Ticket

Unit 4 Review and Assessment

9. **Count, Read, and Write Numbers 11 to 20**- Instruct students to count groups of 11 to 20 objects in various arrangements to determine how many, as well as count out a given number of objects from 11 to 20 to show that quantity. Instruct students to read and write teen numbers and the number 20. Instruct students to recognize symbols and read numerals that represent how many there are altogether in groups of 11 to 20 objects. Instruct students to apply what they learned in previous lessons on counting 1 through 10 and on relating numbers to the landmark numbers 5 and 10. Instruct students that counting teen numbers is representing a group of 10 and some more ones. Students should be instructed ro name and record numbers 11 to 20. Students will learn proper number formation to write these numbers.

a. Complete Lesson 16, Sessions 1-5 (5 days)

b. Possible strategies include but are not limited to:

    i. Read and write numbers from 11 to 20

    ii. Option: By making a counting book, students are using counting strategies to show up to 20 objects, identifying and writing written numerals up to 20, and recognizing that numbers 11 – 19 are 10 and some more. This will help students begin to acquire place value skills. (Cookie Counting Book)

    iii. Show students number cards or write numbers on the board (11-19) and have the students count out that many manipulatives. Review isolating the ten so students see the ten and then the remaining objects that make the number shown.

    iv. Using the student workbook students can match pictures to numbers by drawing a line from one to the other.

v. Use ten frames (two frames) to have students make and write teen numbers.

vi. Use ten frames (two frames) to have students make and write teen numbers, then add one more then the given teen number to write that number. For example, build 14, add one more and write 15.

c. Lesson Vocabulary: eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, teen numbers, teen numbers, twenty, count, ten, next place

d. Comprehension Check, Lesson Quiz, or Exit Ticket

10. **Count Within 100-** Instruct the students to practice rote counting to 100 by 10s. Instruct students to use their knowledge of the count sequence to 10 to recite the multiples of 10, for example, using the patterns 6, 7, 8 to say sixty, seventy, eighty. Instruct students to use their familiarity with 10 as a benchmark number to understand that, just as 20 is 10 and 10 more, the other multiples of 10 each represent yet another 10. Instruct students to count to 100 by ones, starting at 1 or any other number. Instruct students to begin by saying the counting words in order, up to a given number. Instruct students to use the numbers to count objects and say how many up to 20 (cardinality).

a. Complete Lesson 17, Sessions 1-5 (5 days)

b. Possible strategies for teaching counting to 100 by tens include and are not limited to:

i. Counting by tens workout (Jack Hartman)- Shows the numbers on the screen as you exercise and count. Can be used as a brain break etc.

ii. Create groups of tens to count. (3 groups of ten cubes etc.) Students can also circle pictures of groups of ten to count.

iii. Teach students to notice patterns – Using a 100 chart, have students talk about what they notice about how the numbers are arranged. They may notice that it follows a 0-9 pattern or that each column has the same number. Have students share the patterns they notice, record what they say and share their findings with the class.

iv. Count on from a given number that is less than 100.

v. Use a collection of manipulatives for students to count into groups of tens to determine the total number of manipulatives

a. Possible strategies for counting to 100 by ones include but are not limited to:

i. Count on from a given number that is less than 100.

ii. Counting by ones workout (Jack Hartman)- Shows the numbers on the screen as you exercise and count. Can be used as a brain break etc.

iii. Teach students to notice patterns – Using a 100 chart, have students talk about what they notice about how the numbers are arranged. They may notice that it follows a 0-9 pattern or that each column has the same number. Have students share the patterns they notice, record what they say and share their findings with the class.

iv. How many days have we been in school? – This is great practice for counting to 100 every day! Students add a straw (or what you use) every day to symbolize how many days they have been in school. Every time they make a 10, they bundle the straws.

v. Calendar Counting – Numbers 1 to 31 are tricky! When teaching kids to rote count, focus on numbers 1 to 31 first. You can use a calendar every day to practice writing numbers, saying what number comes before and after and counting how many days until a special event. You can also move numbers around in the wrong spot and ask students to find the number that is in the wrong spot.

vi. Count around the circle – Have students partner count or count around a circle. Each student says the next number. Remember, don't always start at 1! Use number cards to pick a number to begin with. If it is the beginning of the year, I would limit the range to numbers 1 to 31.

b. Lesson Vocabulary: count on, count, organize

c. Comprehension Check, Lesson Quiz, or Exit Ticket

GENERAL QUESTIONS FOR TEACHER USE

Adapted from Growing Success and materials from Math GAINS and TIPS4RM (Georgia Department of Education)

Reasoning and Proving

• How can we show that this is true for all cases?

• In what cases might our conclusion not hold true?

• How can we verify this answer?

• Explain the reasoning behind your prediction.

• Why does this work?

• What do you think will happen if this pattern continues?

• Show how you know that this statement is true.

• Give an example of when this statement is false.

• Explain why you do not accept the argument as proof.

• How could we check that solution?

• What other situations need to be considered?

Reflecting

• Have you thought about...?

• What do you notice about...?

• What patterns do you see?

• Does this problem/answer make sense to you?

• How does this compare to...?

• What could you start with to help you explore the possibilities?

• How can you verify this answer?

• What evidence of your thinking can you share?

• Is this a reasonable answer, given that...?

Selecting Tools and Computational Strategies

• How did the learning tool you chose contribute to your understanding/solving of the problem? Assist in your communication?

• In what ways would [name a tool] assist in your investigation/solving of this problem?

• What other tools did you consider using? Explain why you chose not to use them.

• Think of a different way to do the calculation that may be more efficient.

• What estimation strategy did you use?

Connections

• What other math have you studied that has some of the same principles, properties, or procedures as this?

• How do these different representations connect to one another?

• When could this mathematical concept or procedure be used in daily life?

• What connection do you see between a problem you did previously and today's problem?

Representing

• What would other representations of this problem demonstrate?

• Explain why you chose this representation.

• How could you represent this idea algebraically? graphically?

• Does this graphical representation of the data bias the viewer? Explain.

• What properties would you have to use to construct a dynamic representation of this

situation?

• In what way would a scale model help you solve this problem?

Note: The instructor is encouraged to consult the supplemental resources located under materials to personalize and differentiate instruction for students, as well as address any learning gaps based on formative assessments.

Evidence/Performance Tasks

Formative Assessment:

- Fact Fluency Practice Assessments
- Administer Ready Math Lesson Quizzes at the end of each Lesson
- Administer Comprehension Check (digital)
- Lesson 9 Lesson Quiz Assessment or digital Comprehension Check
- Lesson 10 Lesson Quiz Assessment or digital Comprehension Check
- Lesson 11 Lesson Quiz Assessment or digital Comprehension Check
- Lesson 12 Lesson Quiz Assessment or digital Comprehension Check
- Lesson 13 Lesson Quiz Assessment or digital Comprehension Check
- Lesson 14 Lesson Quiz Assessment or digital Comprehension Check
- Lesson 15 Lesson Quiz Assessment or digital Comprehension Check

- Lesson 16 Lesson Quiz Assessment or digital Comprehension Check
- Lesson 17 Lesson Quiz Assessment or digital Comprehension Check

Summative Assessments:

- Administer Ready Math Mid-Unit Assessments
- Administer Ready Math End of Unit Assessments
    - Unit 4

Benchmark Assessments:

- iReady Diagnostic
- Fact Fluency Assessment
- Acadience Assessment (As a reference, these assessments are not administered by the classroom teacher)

Alternative Assessments:

- Informal Observation
- Small Group Observation
- Exit Tickets
- Math Journal
- Oral and Written Explanations of Reasoning

Materials

The following are approved resources that teachers can include to further unit related objectives:

Core Book List

- Ready Math Teacher Toolbox Resources
    - Whole Class Instruction
        - Teach: Instruction & Practice, Interactive Tutorials,
        - Assess: Lesson Quizzes & Unit Assessments
    - Small Group Differentiation
        - Prepare: Prerequisite Lessons

        - Reteach: Tools for Instruction
        - Reinforce: Math Center Activities
        - Extend: Enrichment Activities
- Ready Math Workbook
- Ready Math Slides
- Digital Math Tools
- iReady My Path
- Learning Games
- The Second 10 Weeks Number Talks
- The Third 10 Weeks Number Talks
- Manipulatives: counters, tens frames, connecting cubes, base 10 blocks
- White boards
- Number paths
- Hundred charts
- Blank Bar Models
- Grid Paper
- Blank Number Bonds
- CPS District Mathematics Google Drive Folder

Supplemental Resources:

- Math Journals- Students will work to represent their number (differentiated by a preassessment). TW show groups of cubes beginning at 3 and begin taking amount away to only show part of the desired amount. SW say how many cubes are visible and how many are missing. TW repeat with the next number until the student stops recognizing the missing parts. That will be the number they begin working on representing in their journal. For example, if a student stops at 4, they will count out 4 in different combinations using manipulatives in 8 different ways (i.e. 2 blue, 2 red, 1 blue, 3 red, etc). They will then repeat using different manipulatives and teacher will record in their journal. When they have filled in an entire column, they move to representing the next number. Students will continue through the competency based activities and record in their journal.
- Rainbow to Ten
- Making a Ten- Ten frame card recording sheet

- Decomposing/Composing on a ten frame (or double)
- Snowball Addition and Subtraction
- Making Ten MiniBook
- Connect Four Addition and Subtraction
- Number Bond Dash

Literature to assist in teaching:

- 12 Ways to Get to 11, by Eve Merriam
- Piglets Playing: Counting from 11-20, by Megan Atwood
- Cat Count, by Betsy Lewin
- Jack the Builder, by Stuart J. Murphy
- Mall Mania, by Stuart J. Murphy
- Elevator Magic, by Stuart J. Murphy
- Pete the Cat and his Four Groovy Buttons, by Eric Litwin
- The Action of Subtraction, by Brian Gable
- Zero the Hero, by Joan Holub

Any additional resources that are not included in this list will be presented to and reviewed by the supervisor before being included in lesson plans. This ensures resources are reviewed and vetted for relevance and appropriateness prior to implementation.

Standards

The standards in this unit reflect a developmental progression across grade levels and make interdisciplinary connections across content areas including the humanities, technology and career readiness. Word problems include various names from different cultures, races, and ethnicities which incorporate the following standards:

Amistad Commission

This unit also reflects the goals of the Department of Education and the Amistad Commission including the infusion of the history of Africans and African-Americans into the curriculum in

order to provide an accurate, complete, and inclusive history regarding the importance of of African-Americans to the growth and development of American society in a global context.

Asian American and Pacific Islander History Law

This unit includes instructional materials that highlight the history and contributions of Asian Americans and Pacific Islanders in accordance with the New Jersey Student Learning Standards in Social Studies.

New Jersey Diversity and Inclusion Law

In accordance with New Jersey's Chapter 32 Diversity and Inclusion Law, this unit includes instructional materials that highlight and promote diversity, including:

economic diversity, equity, inclusion, tolerance, and belonging in connection with gender and sexual orientation, race and ethnicity, disabilities, and religious tolerance.

MATH.K-12.1	Make sense of problems and persevere in solving them
MATH.K-12.2	Reason abstractly and quantitatively
MATH.K.CC.A.1	Count to 100 by ones and by tens.
MATH.K.CC.A.2	Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
MATH.K.CC.A.3	Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).
MATH.K-12.3	Construct viable arguments and critique the reasoning of others
MATH.K-12.4	Model with mathematics
MATH.K.CC.B.4.a	When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
MATH.K.CC.B.4.b	Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
MATH.K-12.5	Use appropriate tools strategically
MATH.K.CC.B.4.c	Understand that each successive number name refers to a quantity that is one larger.
MATH.K.CC.B.5	Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
MATH.K-12.6	Attend to precision
MATH.K-12.7	Look for and make use of structure
MATH.K.CC.C.6	Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.
MATH.K.CC.C.7	Compare two numbers between 1 and 10 presented as written numerals.

MATH.K-12.8	Look for and express regularity in repeated reasoning
MATH.K.OA.A.1	Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
MATH.K.OA.A.2	Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
MATH.K.OA.A.3	Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).
MATH.K.OA.A.4	For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.
MATH.K.OA.A.5	Demonstrate accuracy and efficiency for addition and subtraction within 5.
MATH.K.NBT.A.1	Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.
MATH.K.G.A.1	Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.
MATH.K.G.A.2	Correctly name shapes regardless of their orientations or overall size.
MATH.K.G.B.4	Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).
MATH.K.G.B.5	Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
MATH.K.G.B.6	Compose simple shapes to form larger shapes.
ELA.SL.PE.K.1	Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.
ELA.SL.PE.K.1.A	Follow agreed-upon norms for discussions (e.g., listening to others with care and taking turns speaking about the topics and texts under discussion).
ELA.SL.PE.K.1.B	Continue a conversation through multiple exchanges.
ELA.SL.II.K.2	Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
ELA.SL.ES.K.3	Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
ELA.SL.UM.K.5	Add drawings or other visual displays to descriptions as desired to provide additional detail.
ELA.SL.AS.K.6	Speak audibly and express thoughts, feelings, and ideas clearly.
WRK.K-12.P.1	Act as a responsible and contributing community members and employee.
WRK.K-12.P.4	Demonstrate creativity and innovation.
WRK.K-12.P.5	Utilize critical thinking to make sense of problems and persevere in solving them.
TECH.9.4.2.CI	Creativity and Innovation

Suggested Strategies for Modifications

Possible accommodations/modification for Kindergarten

Note: Teachers can find more specific modifications for English learners, learners with special needs,learners reading below grade level, and advanced learners on the Ready Math website.