

# **Madison Public Schools**

## **Grade K Mathematics Curriculum**

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## Course Overview

### Description

Grade K Mathematics is a full year course aligned to the Kindergarten New Jersey Student Learning Standards. Instruction will focus on two critical areas: representing and comparing whole numbers and describing shapes and space. There is a heavy emphasis on understanding whole numbers and different ways to represent them. The Standards for Mathematical Practice are incorporated in each unit to ensure students are developing procedural fluency, problem solving skills, and productive dispositions towards Mathematics. A Singapore Approach to Mathematics will be implemented to allow students to cover material in depth. The Singapore Mathematics Framework focuses on skills, concepts, processes, metacognition, and student attitudes. Students will move through topics using a Concrete-Pictorial-Abstract (CPA) progression to develop conceptual understanding. Upon completing this course, students will be able to think about the world around them mathematically.

### Goals

This course aims to:

- build student confidence and interest in Mathematics
- encourage students to make sense of quantities
- develop students' ability to communicate mathematical ideas
- develop students' ability to cooperatively discuss mathematics
- enable students to become strategic mathematical problem solvers
- empower students to monitor their thinking and regulate their learning
- develop students' ability to use, apply, and model mathematics to solve problems arising in everyday life, society, and the workplace

### Materials

**Core:** Math in Focus Textbook/workbook KA and KB (Teacher and Student Editions), ST Math

**Supplemental:** Extra Practice Grade K (online), Enrichment Grade K (online), Fact Fluency Grade K (online), Ed your friend in learning platform, Unit assessments in unit plans, Freckle.

### Resources

The unit plans contain formative assessment, number talks, exploration activities, journal entries, independent practice, and summative assessments.

### Benchmark Assessments

Students will take the Star Mathematics assessment at least 2 times during the school year.

### Modifications and Adaptations for Special Needs Learners

(Gifted and Talented Students, English Language Learners, Students with Special Needs, At-Risk Students, and Students with 504 Plans)

## Scope and Sequence (Pacing Guide)

Unit Number	Topic of Study	Duration (Weeks Taught)
1	Numbers to 5	3 weeks
2	Numbers to 10	4 weeks
3	Measurement	3 weeks
4	Compare numbers to 10	3 weeks
5	Flat and Solid Shapes	4 weeks
6	Numbers to 20	3 weeks
7	Addition	4 weeks
8	Subtraction	4 weeks
9	Numbers to 100	3 weeks
10	Sorting	3 weeks

Unit 1 Overview	
<b>Unit Title:</b> Numbers to 5	
<b>Unit Summary:</b> In this unit, students will develop an understanding of numbers 0 through 5 and write numerals 0-5. Students will recognize number words. Students will be able to count up to 5 objects in a group and understand that the order in which objects are counted has no effect on the total number of objects. Students will learn to order numbers 0-5 in both increasing and decreasing order.	
<b>Suggested Pacing:</b> 13 days	
Learning Targets	
<b>Unit Essential Questions:</b> <ul style="list-style-type: none"> <li>Why do we need to count?</li> <li>How do we count?</li> </ul>	
<b>Unit Enduring Understandings:</b> <ul style="list-style-type: none"> <li>there is a relationship between the numbers and quantities.</li> <li>when counting, each object has one and only one number name and each number name is paired with one and only one object (one-to-one correspondence).</li> <li>when counting, the last number name said tells the number of objects counted.</li> <li>the number of objects is the same regardless of the order in which they were counted.</li> <li>each successive number name refers to a quantity that is one larger.</li> <li>numbers can be ordered in both increasing and decreasing order.</li> </ul>	
Evidence of Learning	
<b>Formative Assessments:</b> A variety of formative assessments will be used throughout the lesson, such as Observation, Class Discussion, Independent Practice	
<b>Summative Assessments:</b> Chapter 1 unit assessments. The unit assessment contains a variety of coloring, matching, counting, and fill in the blank questions that assess student understanding of the objectives and NJ Student Learning Standards listed below.	
<b>Alternative Assessments:</b> Students will have the opportunity to demonstrate their learning by completing chapter 1 Performance Tasks in student textbook/workbook.	

Objectives (Students will be able to...)	Key Concepts (Students will know...)	Suggested Assessments	Standards (NJSLs)
Understand the value of each number 0-5.  Write and read numbers 0-5  Count up to 5 objects in a group  Order numbers to 0-5	Count groups of 1 and 2.  Read and write the numerals 1 and 2, and recognize them in words  Count groups of 3 and 4.	Students will choose a number between 1 and 5 and they will be asked to draw that number of objects, write the numeral and word form of their number.	K.CC.A.3- Write numbers 0-20. Count objects up to 20.  K.CC.B.4- Connect counting to cardinality.  K.CC.B.5- Count up to 20 objects in different arrangements, or up to 10 objects in a scattered configuration. Count out a given number of objects from 1 to 20.  <i>Math Practices:</i>

	<p>Read and write the numerals 3 and 4, and recognize them in words</p> <p>Count groups of 5.</p> <p>Read and write the numeral 5, and recognize it in word</p> <p>Read and write the numeral 0, and recognize it in word</p> <p>Order numbers to 5.</p> <p>Vocabulary: 1 one, 2 two, 3 three, 4 four, 5 five, 0 zero,</p>		<p>SMP 1. Make sense of problems and persevere in solving them.</p> <p>SMP 2. Reason abstractly and quantitatively.</p> <p>SMP 3. Construct viable arguments and critique the reasoning of others.</p> <p>SMP 4. Model with mathematics.</p> <p><b>Interdisciplinary Connection:</b> <b>NJSLSA.SL1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.</b></p>
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Unit 2 Overview	
<b>Unit Title:</b> Numbers to 10	
<b>Unit Summary:</b> In this unit, students will develop an understanding of numbers 6 through 10 and write numerals 6-10. Students will recognize number words. Students will be able to count up to 10 objects in a group and understand that the order in which objects are counted has no effect on the total number of objects. Students will learn to order numbers to 10 in both increasing and decreasing order. Students will learn to use ordinals to tell order. Students will decompose numbers in more than one way by using models, pictures, or manipulatives.	
<b>Suggested Pacing:</b> 17 days	
Learning Targets	
<b>Unit Essential Questions:</b> <ul style="list-style-type: none"> <li>• Why do we need to count?</li> <li>• How do we count?</li> <li>• Why do we compose and decompose numbers?</li> </ul>	
<b>Unit Enduring Understandings:</b> <ul style="list-style-type: none"> <li>• there is a relationship between the numbers and quantities.</li> <li>• when counting, each object has one and only one number name and each number name is paired with one and only one object (one-to-one correspondence).</li> <li>• when counting, the last number name said tells the number of objects counted.</li> <li>• the number of objects is the same regardless of the order in which they were counted.</li> <li>• each successive number name refers to a quantity that is one larger.</li> <li>• numbers can be ordered in both increasing and decreasing order.</li> </ul>	
Evidence of Learning	
<b>Formative Assessments:</b> A variety of formative assessments will be used throughout the lesson, such as Observation, Class Discussion, Independent Practice	
<b>Summative Assessments:</b> Chapter 2 unit assessments. The unit assessment contains a variety of coloring, matching, counting, and fill in the blank questions that assess student understanding of the objectives and NJ Student Learning Standards listed below.	
<b>Alternative Assessments:</b> Students will have the opportunity to demonstrate their learning by completing chapter 2 Performance Tasks in student textbook/workbook.	

Objectives (Students will be able to...)	Key Concepts (Students will know...)	Suggested Assessments	Standards (NJSLS)
Understand the value of each number 0-5.  Write and read numbers 0-5  Count up to 5 objects in a group	Count groups of 6 and 7.  Read and write the numerals 6 and 7, and recognize them in words.  Count groups of 8 and 9.	Students will choose a number between 6 and 10 and they will be asked to draw that number of objects, write the numeral and word form of their number.	K.CC.A.3- Write numbers 0-20. Count objects up to 20.  K.CC.B.4- Connect counting to cardinality.  K.CC.B.5-

Order numbers to 0-5	<p>Read and write the numerals 8 and 9, and recognize them in words.</p> <p>Count groups of 6 and 7.</p> <p>Read and write the numerals 6 and 7, and recognize them in words.</p> <p>Count groups of 10.</p> <p>Read and write the numeral 10 and recognize it in words.</p> <p>Order numbers to 10.</p> <p><i>Vocabulary:</i> 6 six, 7 seven, 8 eight, 9 nine, 10 ten,</p>		<p>Count up to 20 objects in different arrangements, or up to 10 objects in a scattered configuration. Count out a given number of objects from 1 to 20.</p> <p><i>Math Practices:</i> SMP 1. Make sense of problems and persevere in solving them. SMP 2. Reason abstractly and quantitatively. SMP 3. Construct viable arguments and critique the reasoning of others. SMP 4. Model with mathematics. SMP 5. Use appropriate tools strategically. SMP 7. Look for and make use of structure.</p> <p><b><u>Interdisciplinary Connections:</u></b></p> <p><b>NJSLSA.SL1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.</b></p>
Compose and Decompose numbers 0-9 in multiple ways.	<p>Make number pairs to 10.</p> <p><i>Vocabulary:</i> Number pairs</p>	Students will be given images of different numbers of objects. Students will be asked to order the objects and then identify the image in a given ordinal position.	<p>K.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way.</p> <p>K.OA.4 Find the number that makes 10 when added to any number from 1 to 9.</p>
Use ordinal numbers to tell order	<p>Use ordinal numbers to name a position of an object.</p> <p><i>Vocabulary:</i> 1st first, 2nd second, 3rd, third, 4th fourth, 5th fifth, 6th sixth, 7th seventh, 8th eighth, 9th ninth, 10th tenth</p>	Students will be asked to show two ways to make 10 using pairs of numbers.	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

Unit 3 Overview	
<b>Unit Title:</b> Measurement	
<b>Unit Summary:</b> In this unit, students will learn that all objects have measurable attributes such as height, length, and weight. Students will use proper vocabulary to compare items based on a given measurable attribute. Students will begin to describe the world around them using mathematical terms.	
<b>Suggested Pacing:</b> 12 Days	
Learning Targets	
<b>Unit Essential Questions:</b> <ul style="list-style-type: none"> <li>Why do we need to measure objects?</li> <li>What attributes are measurable?</li> <li>How do we compare objects?</li> </ul>	
<b>Unit Enduring Understandings:</b> <ul style="list-style-type: none"> <li>measurable attributes are a way to compare objects.</li> <li>an object may have multiple measurable attributes.</li> <li>multiple objects may have the same measurable attribute.</li> </ul>	
Evidence of Learning	
<b>Formative Assessments:</b> A variety of formative assessments will be used throughout the lesson, such as Observation, Class Discussion, Independent Practice	
<b>Summative Assessments:</b> Chapter 3 unit assessments. The unit assessment contains a variety of color the correct box, circle the correct answer, and fill in the blank questions that assess student understanding of the objectives and NJ Student Learning Standards listed below.	
<b>Alternative Assessments:</b> Students will have the opportunity to demonstrate their learning by completing chapter 3 Performance Tasks in student textbook/workbook.	

Objectives (Students will be able to...)	Key Concepts (Students will know...)	Suggested Assessments	Standards (NJSLS)
<p>Understand measurable attributes</p> <p>Use appropriate vocabulary to describe measurable attributes</p> <p>Order and compare items based on measurable attributes</p>	<p>Students will compare the length of two objects</p> <p>Students will measure length using non-standard units.</p> <p>Students will compare heights of two objects</p> <p>Students will measure height using non-standards units</p> <p>Describe the measurable attributes of a single object</p> <p><i>Vocabulary:</i> longer, shorter, same length, as long as, taller, shorter, same height, as tall as, heavier, lighter, same weigh, as heavy as</p>	<p>Students will be given two objects to compare using the attributes of length, height and weight.</p>	<p>K.MD.A.1- Describe an object by its measurable attributes, such as length or weight.</p> <p>K.MD.A.2- Compare two objects by a common measurable attribute and describe the difference.</p> <p><i>Math Practices:</i> SMP 1. Make sense of problems and persevere in solving them. SMP 2. Reason abstractly and quantitatively. SMP 3. Construct viable arguments and critique the reasoning of others. SMP 4. Model with mathematics.</p>



## Unit 4 Overview

**Unit Title:** Compare Numbers to 10

### Unit Summary:

In this unit, students will be able to compare groups based on size and develop an understanding of “one more than” or “one less than.” Students will develop their awareness of conservation of quantity, that is, to recognize that when a group of objects is spaced out further or closer together than another group of objects of the same number, both groups are the same.

**Suggested Pacing:** 15 days

## Learning Targets

### Unit Essential Questions:

- How do we compare two numbers?

### Unit Enduring Understandings:

- “greater than” means the amount is more; “less than” means the amount is less.
- identify one less or one more than a given number

## Evidence of Learning

**Formative Assessments:** A variety of formative assessments will be used throughout the lesson, such as Observation, Class Discussion, Independent Practice

**Summative Assessments:** Chapter 4 unit assessments. The unit assessment contains a variety of coloring the correct box and circle the group questions that assess student understanding of the objectives and NJ Student Learning Standards listed below.

**Alternative Assessments:** Students will have the opportunity to demonstrate their learning by completing chapter 4 Performance Tasks in student textbook/workbook.

Objectives (Students will be able to...)	Key Concepts (Students will know...)	Suggested Assessments	Standards (NJSLs)
<p>Compare numbers to 10</p> <p>Understand one more and one less</p>	<p>Compare two sets of objects using more than</p> <p>Compare two sets of objects using fewer than</p> <p>Compare two sets of objects using the same</p> <p>Compare two number to 10</p> <p>Identify 1 more or 1 less from a given number</p> <p>Vocabulary: more than, fewer than, same, greater than, less than, 1 more, 1 less</p>	<p>When given a set of objects between 1-10, students can tell 1 more and/or 1 less than the number of objects they were given.</p>	<p>K.CC.B.4c- Understand that each successive number name refers to a quantity that is one larger.</p> <p>K.CC.C.6- Compare the number of objects in two groups using "greater than," "less than," "equal to."</p> <p>K.CC.C.7- Compare two numbers between 1 and 10.</p> <p><i>Math Practices:</i> SMP 2. Reason abstractly and quantitatively. SMP 4. Model with mathematics. SMP 6. Attend to precision.</p> <p><b><i>Interdisciplinary Connections:</i></b></p> <p><b>NJSLSA.SL1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.</b></p>

Unit 5 Overview	
<b>Unit Title:</b> Flat and Solid Shapes	
<b>Unit Summary:</b> In this unit, students will learn to identify basic shapes and distinguish between 2D and 3D shapes. They will describe shapes and their attributes with informal vocabulary such as “corners.” students will learn to use position words such as “above” and “below” to name the relative positions of shapes. Students will learn to compose larger shapes from simple shapes. Students will explore where shapes are found in the real world.	
<b>Suggested Pacing:</b> 19 days	
Learning Targets	
<b>Unit Essential Questions:</b> <ul style="list-style-type: none"> <li>• What characteristics of a shape help us to name it?</li> <li>• How does knowing the name of shapes help us?</li> <li>• Why do we need to identify shapes?</li> <li>• Why would we compose shapes?</li> </ul>	
<b>Unit Enduring Understandings:</b> <ul style="list-style-type: none"> <li>• shapes have positions in the world relative to other things.</li> <li>• characteristics of shapes give it a name.</li> <li>• shapes can be formed by composing other shapes.</li> </ul>	
Evidence of Learning	
<b>Formative Assessments:</b> A variety of formative assessments will be used throughout the lesson, such as Observation, Class Discussion, Independent Practice	
<b>Summative Assessments:</b> Chapter 5 unit assessments. The unit assessment contains a variety of coloring the correct answer, circle the answer and matching questions that assess student understanding of the objectives and NJ Student Learning Standards listed below.	
<b>Alternative Assessments:</b> Students will have the opportunity to demonstrate their learning by completing chapter 5 Performance Tasks in student textbook/workbook.	

Objectives (Students will be able to...)	Key Concepts (Students will know...)	Suggested Assessments	Standards (NJSLS)
Students will distinguish between 2 and 3 dimensional shapes.  Students will identify and name shapes in their environment.  Students will compose larger shapes from simple shapes	Students will identify, name and describe flat shapes  Students will understand that some shapes have flat faces, edges, and corners and some do not  Students will recognize flat shapes in real life  Identify, name and describe solid shapes	Students will be given a pattern of shapes and asked to identify the shapes and then complete the pattern.	K.G.A.1- Describe objects using names of shapes and describe their relative positions.  K.G.A.3- Identify shapes as two-dimensional or three-dimensional  K.G.B.4- Compare two- and three- dimensional shapes. Describe their similarities, differences, parts and other attributes.

	<p>Students will recognize solid shapes in real life</p> <p>Students will use position words to name relative positions of shapes</p> <p>Students will use flat shapes to make new shapes.</p> <p>Students will cut flat shapes to make new shapes.</p> <p>Students will use shapes to make a picture.</p> <p>Students will analyze and compare shapes</p> <p>Use flat shapes to identify and extend patterns.</p> <p>Use solid shapes to identify and extend patterns</p> <p>Vocabulary: triangle, square, hexagon, circle, rectangle, cube, cone, cylinder, sphere, roll, slide, stack, behind, above, next to, beside, in front of, below, side corner, flat faces, curved surfaces,</p>		<p><i>Math Practices:</i> SMP 1. Make sense of problems and persevere in solving them. SMP 2. Reason abstractly and quantitatively. SMP 3. Construct viable arguments and critique the reasoning of others. SMP 4. Model with mathematics. SMP 6. Attend to precision.</p> <p><b><u>Interdisciplinary Connection:</u></b></p> <p><b>1.5.2.Cr1b: Engage in individual and collaborative art making through observation and investigation of the world, and in response to personal interests and curiosity.</b></p> <p><b>NJSLSA.SL1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.</b></p>
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Unit 6 Overview	
<b>Unit Title:</b> Numbers to 20	
<b>Unit Summary:</b> In this unit, students will develop an understanding of numbers 10 through 20 and write numerals 10-20. Students will be able to count up to 20 objects in a group. Students will decompose numbers 10-20 into one group of ten and a group of 0-9 ones to gain an understanding of place value. Students will continue comparing and ordering sets and numbers up to 20.	
<b>Suggested Pacing:</b> 14 days	
Learning Targets	
<b>Unit Essential Questions:</b> <ul style="list-style-type: none"> <li>Why do we need to count?</li> <li>How do we count?</li> <li>Why do we compose and decompose numbers?</li> </ul>	
<b>Unit Enduring Understandings:</b> <ul style="list-style-type: none"> <li>there is a relationship between the numbers and quantities.</li> <li>when counting, each object has one and only one number name and each number name is paired with one and only one object (one-to-one correspondence).</li> <li>when counting, the last number name said tells the number of objects counted.</li> <li>the number of objects is the same regardless of the order in which they were counted.</li> <li>each successive number name refers to a quantity that is one larger.</li> <li>teen numbers (10-19) are composed of ten ones and zero, one, two, three, four, five, six, seven, eight, or nine ones.</li> </ul>	
Evidence of Learning	
<b>Formative Assessments:</b> A variety of formative assessments will be used throughout the lesson, such as Observation, Class Discussion, Independent Practice	
<b>Summative Assessments:</b> Chapter 6 unit assessments. The unit assessment contains a variety of count and write or fill in the blank questions that assess student understanding of the objectives and NJ Student Learning Standards listed below.	
<b>Alternative Assessments:</b> Students will have the opportunity to demonstrate their learning by completing chapter 6 Performance Tasks in student textbook/workbook.	

Objectives (Students will be able to...)	Key Concepts (Students will know...)	Suggested Assessments	Standards (NJSLs)
Develop an understanding of place value (tens and ones)  Count to 20  Read and write numerals up to 20	Count groups of 11, 12, and 13  Read and write the numerals 11, 12, and 13, recognize them in words.  Count groups of 14, 15, and 16	Students will be given four images or groups of manipulatives with a different number of objects in. Students will need to count the objects and then order them in the correct order based on the number of objects in each group.	K.CC.B.3- Write numbers 0-20. Count objects up to 20.  K.CC.B.5- Count up to 20 objects in different arrangements, or up to 10 objects in a scattered configuration. Count out a given number of objects from 1 to 20.

	<p>Read and write the numerals 14, 15, and 16, recognize them in words.</p> <p>Count groups of 17, 18, 19, and 20</p> <p>Read and write the numerals 17, 18, 19, and 20, recognize them in words.</p> <p>Order numbers to 20</p> <p>Take apart numbers to 20</p> <p><i>Vocabulary:</i> 11 eleven, 12 twelve, 13 thirteen, 14 fourteen, 15 fifteen, 16 sixteen, 17 seventeen, 18 eighteen, 19 nineteen, 20 twenty, count on, count back</p>		<p>K.NBT.A.1- Compose and decompose numbers 11 to 19 into ten ones and some further ones.</p> <p><i>Math Practices:</i></p> <ol style="list-style-type: none"> <li>1. Make sense of problems and persevere in solving them.</li> <li>2. Reason abstractly and quantitatively.</li> <li>3. Construct viable arguments and critique the reasoning of others.</li> <li>4. Model with mathematics.</li> </ol> <p><b><u>Interdisciplinary Connections:</u></b></p> <p><b>NJSLSA.SL1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.</b></p>
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Unit 7 Overview	
<b>Unit Title:</b> Addition	
<b>Unit Summary:</b> In this unit, students will learn to make and solve addition story problems. They will understand addition as putting together and adding to. They will learn about the plus sign and equal sign to write addition number sentences. Students will learn two strategies to add within 10. They will learn to add by counting all and counting on from the greater number. Students will begin using addition to solve real world problems.	
<b>Suggested Pacing:</b> 17 days	
Learning Targets	
<b>Unit Essential Questions:</b> <ul style="list-style-type: none"> <li>Why do we need to add?</li> <li>What happens when we put groups together or add to a group?</li> </ul>	
<b>Unit Enduring Understandings:</b> <ul style="list-style-type: none"> <li>numbers can be decomposed.</li> <li>making a sum of 10 will be important to make work easier.</li> <li>objects, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations can help one understand problems and find solutions.</li> </ul>	
Evidence of Learning	
<b>Formative Assessments:</b> A variety of formative assessments will be used throughout the lesson, such as Observation, Class Discussion, Independent Practice	
<b>Summative Assessments:</b> Chapter 7 unit assessments. The unit assessment contains a variety of fill in the blank questions that assess student understanding of the objectives and NJ Student Learning Standards listed below.	
<b>Alternative Assessments:</b> Students will have the opportunity to demonstrate their learning by completing chapter 7 Performance Tasks in student textbook/workbook.	

Objectives (Students will be able to...)	Key Concepts (Students will know...)	Suggested Assessments	Standards (NJSLS)
Understand and solve addition story problems.	Make addition stories with objects, fingers, pictures and drawings.  Add by putting together and adding to.  Use addition facts within 5 to add.  Use the plus (+) and equal (=) signs to show addition.  Use a ten frame to add numbers within 10	Students will create their own addition story. They will draw their story problem and then write an addition sentence to go with their story.	K.OA.A.1- Represent addition and subtraction in different ways.  K.OA.A.2- Solve addition and subtraction word problems, and add and subtract within 10.  K.OA.A.5- Fluently add and subtract within 5.  <i>Math Practices:</i> SMP 1. Make sense of problems and persevere in solving them. SMP 2. Reason abstractly and quantitatively.

	<p>Count on to add numbers within 10</p> <p>Write and solve addition sentences</p> <p><i>Vocabulary:</i> addition story, in all, put together, add to, plus (+), equal (=)</p>	<p>SMP 3. Construct viable arguments and critique the reasoning of others. SMP 4. Model with mathematics. SMP 6. Attend to precision. SMP 7. Look for and make use of structure.</p> <p><b><u>Career Readiness. Life literacies, and Key Skills:</u></b></p> <p><b>9.1.2.FP.2: Differentiate between financial wants and needs.</b></p> <p><b>9.4.2.CI.1: Demonstrate openness to new ideas and perspectives</b></p> <p><b>9.4.2.CT.3: Use a variety of types of thinking to solve problems</b></p> <p><b><u>Computer Science:</u></b> <b>8.1.2.DA.3: Identify and describe patterns in data visualizations</b></p>
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## Unit 8 Overview

**Unit Title:** Subtraction

**Unit Summary:**

In this unit, students will learn to solve subtraction story problems. They will understand subtraction as taking a group of objects apart and taking some objects from a group. They will learn about the minus sign and equal sign to write subtraction number sentences. Students will learn two strategies to subtract, using a ten frame and by counting back. Students will begin using subtraction to solve real world problems.

**Suggested Pacing:** 17 days

## Learning Targets

**Unit Essential Questions:**

- Why do we need to subtract?
- What happens when we take apart groups or take away from a group?

**Unit Enduring Understandings:**

- numbers can be decomposed.
- objects, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations can help one understand problems and find solutions.

## Evidence of Learning

**Formative Assessments:** A variety of formative assessments will be used throughout the lesson, such as Observation, Class Discussion, Independent Practice

**Summative Assessments:** Chapter 8 unit assessments. The unit assessment contains a variety of fill in the blank questions that assess student understanding of the objectives and NJ Student Learning Standards listed below.

**Alternative Assessments:** Students will have the opportunity to demonstrate their learning by completing chapter 8 Performance Tasks in student textbook/workbook.

Objectives (Students will be able to...)	Key Concepts (Students will know...)	Suggested Assessments	Standards (NJSLs)
Understand and solve subtraction story problems.	<p>Make subtraction stories with objects, fingers, pictures, and drawings.</p> <p>Subtract by taking from and taking apart.</p> <p>Use subtraction facts within 5 to subtract.</p> <p>Use the minus (-) and equal (=) signs to show subtraction.</p> <p>Use a ten frame to subtract numbers within 10</p> <p>Count back to subtract within 10</p>	Students will create their own subtraction story. They will draw their story problem and then write a subtraction sentence to go with their story.	<p>K.OA.A.1- Represent addition and subtraction in different ways.</p> <p>K.OA.A.2- Solve addition and subtraction word problems, and add and subtract within 10.</p> <p>K.OA.A.5- Fluently add and subtract within 5.</p> <p><i>Math Practices:</i> SMP 1. Make sense of problems and persevere in solving them. SMP 2. Reason abstractly and quantitatively. SMP 3. Construct viable arguments and critique the reasoning of others.</p>



	<p>Write and solve subtraction sentences</p> <p><i>Vocabulary:</i> Subtraction story, left, take from, take apart, minus (-), subtraction sentence</p>		<p>SMP 4. Model with mathematics. SMP 6. Attend to precision. SMP 7. Look for and make use of structure.</p> <p><b><u>Career Readiness, Life literacies, and Key Skills:</u></b></p> <p><b>9.1.2.FP.2: Differentiate between financial wants and needs.</b></p> <p><b>9.4.2.CI.1: Demonstrate openness to new ideas and perspectives</b></p> <p><b>9.4.2.CT.3: Use a variety of types of thinking to solve problems</b></p> <p><b><u>Computer Science:</u></b></p> <p><b>8.1.2.DA.3: Identify and describe patterns in data visualizations</b></p>
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Unit 9 Overview	
<b>Unit Title:</b> Numbers to 100	
<b>Unit Summary:</b> In this unit students will extend their counting ability up to 100. They will learn how to count by 1s and 10s. Students will be able to count forward up to 100 from any given number rather than having to start at 1. They will also extend their understanding of place value to numbers larger than 20.	
<b>Suggested Pacing:</b> 13 days	
Learning Targets	
<b>Unit Essential Questions:</b> <ul style="list-style-type: none"> <li>Why do we need to count?</li> <li>How do we count?</li> </ul>	
<b>Unit Enduring Understandings:</b> <ul style="list-style-type: none"> <li>counting involves one-to-one correspondence.</li> <li>one can count by different amounts (ones, tens).</li> </ul>	
Evidence of Learning	
<b>Formative Assessments:</b> A variety of formative assessments will be used throughout the lesson, such as Observation, Class Discussion, Independent Practice	
<b>Summative Assessments:</b> Chapter 9 unit assessments. The unit assessment contains a variety of coloring the correct box questions that assess student understanding of the objectives and NJ Student Learning Standards listed below.	
<b>Alternative Assessments:</b> Students will have the opportunity to demonstrate their learning by completing chapter 9 Performance Tasks in student textbook/workbook.	

Objectives (Students will be able to...)	Key Concepts (Students will know...)	Suggested Assessments	Standards (NJSLS)
Count up to 100 by ones and tens.  Count forward from a given number	Make tens and count to 50  Count to 50 by ones  Count to 100 by tens  Make tens and count on to 100  Count to 100 by ones  <i>Vocabulary:</i> Count by 10s,	Student will be given a number and asked to count on from the given number by ones.  Student will be given a number and asked to count on from that number by tens	K.CC.A.1- Count to 100 by ones and by tens.  K.CC.A.2- Count forward from any given number.  <a href="#">K.CC.B.4.</a> Connect counting to cardinality.  <i>Math Practices:</i> SMP 1. Make sense of problems and persevere in solving them. SMP 3. Construct viable arguments and critique the reasoning of others. SMP 4. Model with mathematics. SMP 5. Use appropriate tools strategically. SMP 8. Look for and express regularity in repeated reasoning.  <u><b>Interdisciplinary Connection:</b></u>

			<p><b>NJSLSA.SL1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others’ ideas and expressing their own clearly and persuasively.</b></p> <p><b><u>Computer Science:</u></b></p> <p><b>8.1.2.CS.1: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences</b></p>
Identify number patterns	Find missing numbers in a number pattern  <i>Vocabulary:</i> Number pattern	Students will be asked to identify a number that is missing in the pattern	K.CC.A.2- Count forward from any given number.

Unit 10 Overview	
<b>Unit Title:</b> Sorting	
<b>Unit Summary:</b> In this unit, students will review measurable attributes and sort or classify objects according to attributes. They will identify similarities and differences between objects and sets of objects in the real world.	
<b>Suggested Pacing:</b> 12 days	
Learning Targets	
<b>Unit Essential Questions:</b> <ul style="list-style-type: none"> <li>Why do we need to classify objects?</li> <li>How does sorting help us to count?</li> </ul>	
<b>Unit Enduring Understandings:</b> <ul style="list-style-type: none"> <li>classifying objects helps to count total numbers.</li> <li>objects can be described by their attributes.</li> <li>objects can be sorted by their attributes.</li> </ul>	
Evidence of Learning	
<b>Formative Assessments:</b> A variety of formative assessments will be used throughout the lesson, such as Observation, Class Discussion, Independent Practice	
<b>Summative Assessments:</b> Chapter 10 unit assessments. The unit assessment contains a variety of coloring the correct answer, matching, and circle the answer questions that assess student understanding of the objectives and NJ Student Learning Standards listed below.	
<b>Alternative Assessments:</b> Students will have the opportunity to demonstrate their learning by completing chapter 10 Performance Tasks in student textbook/workbook.	

Objectives (Students will be able to...)	Key Concepts (Students will know...)	Suggested Assessments	Standards (NJSLs)
Classify and sort objects according to one or more measurable attributes	Identify objects that are the same and objects that are different  Students will be able to classify objects using one attribute: color, size, shape and identify objects that do not belong in a set.  Students will be able to classify and sort objects according to two and three attributes: color, size, shape, use.  <i>Vocabulary:</i> Sort, same, different, sort by color, sort by counting, sort by shape, sort by size	Students will be given a selection of objects and asked to sort them in multiple ways based on the attributes they have learned (color, size, shape and number)	K.MD.B.3- Classify objects into given categories and sort the categories by count (up to 10 objects).  <i>Math Practices:</i> SMP 1. Make sense of problems and persevere in solving them. SMP 2. Reason abstractly and quantitatively. SMP 3. Construct viable arguments and critique the reasoning of others. SMP 4. Model with mathematics. SMP 6. Attend to precision.  <i>Interdisciplinary Connections:</i> <b>NJSLSA.SL1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.</b>