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| <b>Course: Math Grade K</b>  |  |
| <b>Unit # 1: Position, Length, Height, and Sorting</b>   |  |
| <b>Grade Level(s): Kindergarten</b>  | <b>Length of Unit: Three weeks and 1 day (16 days)</b>   |
| <p><b>Unit Rationale:</b><br/>         This unit introduces children to describing the positions of objects and comparing their relative lengths and heights. It also introduces them to sorting and counting objects. Children draw to show what they already know about these topics. They then reflect on what they learned about these topics at the end of the unit.</p>  |  |
| <b>Stage 1 - Desired Results</b>   |  |
| <p><b>Enduring Understandings:</b><br/><br/> <i>Students will understand that...</i></p> <ul style="list-style-type: none"> <li>● You can compare objects by telling which is longer (or taller) and which is shorter.</li> <li>● You can count how many of each object are in a group and sort the groups by count.</li> <li>● You can sort objects by their attributes.</li> <li>● You can use words to describe the position of objects.</li> </ul> | <p><b>Essential Questions:</b></p> <ul style="list-style-type: none"> <li>● Name an object in the classroom. How could you tell a friend where the object is?</li> <li>● What words can you use to describe where you are?</li> <li>● How can we measure objects?</li> <li>● How are numbers compared?</li> <li>● How can you compare two objects by using descriptive words?</li> </ul>   |
| <p><b>Content:</b><br/><br/> <i>Students will know...</i></p> <ul style="list-style-type: none"> <li>● Comparing Length and Height</li> <li>● Comparing Weight</li> <li>● Sorting objects by their attributes</li> <li>● Vocabulary</li> </ul>   | <p><b>Skills:</b><br/><br/> <i>Students will be able to...</i></p> <ul style="list-style-type: none"> <li>● Describe the position of objects, using words such as <i>above</i> and <i>below</i>.</li> <li>● Use math vocabulary to describe position, length, and height.</li> <li>● Count sorted groups of objects and sort groups by count.</li> <li>● Place objects in given positions</li> <li>● Describe and compare attributes of objects</li> <li>● Compare the lengths of two objects to tell which is longer or shorter</li> <li>● Compare the heights of two objects to tell which is taller or shorter</li> <li>● Sort objects into groups with common attributes</li> <li>● Describe rules used to sort objects into groups</li> <li>● Count sorted groups of objects by count</li> <li>● Use math vocabulary to describe position,</li> </ul> |

length, and height

**NJ Student Learning Standards - Mathematics****Content Standards: 2023 NJSLS-Mathematics (K-12)**

- **K.M.A.1** Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.
- **K.M.A.2** Directly compare two objects with a measurable attribute in common, to see which object has “more of” / “less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.
- **K.DL.A.1** Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (Clarification: Limit category counts to be less than or equal to 10)
- **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.
- **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.

**The Standards for Mathematical Practice:**

1. Make sense of problems and persevere in solving them. .
7. Look for and make use of structure.

**Career Education (Career Readiness, Life Literacies, and Key Skills Practices and 9.2 Standards)**

**9.2.2.CAP.1:** Make a list of different types of jobs and describe the skills associated with each job

**CLKS Practices:**

1. Demonstrate creativity and innovation
2. Utilize critical thinking to make sense of problems and persevere in solving them

**Connected Careers:**

landscaper

**Explanation of how 9.2 standards connect to the unit:**

As students learn about the unit position, length, height, and sorting they will be able to come up with a list of jobs related to the topic. They will then describe skills that are associated with each job they came up with.

**Explanation of how CLKs connect to the unit:**

Creativity and innovation will be demonstrated as students draw an object that is longer, taller, or shorter than another object. Students will also have to draw and label objects in a graphic organizer. Students will use critical thinking to make sense of the problem during the try it section. They will have to explain what the problem is about, identify important information, and clarify what they are trying to find.

**Explanation of how Connected Careers connect to the unit:**

In this lesson students learn about position, length, and height of objects. Landscapers use these math skills every day as they design and plan outdoor spaces.

**Interdisciplinary Standards**

**RI.CR.K.1** With prompting and support, ask and answer questions about key details in an informational text (e.g., who, what, where, when, why, how).

**SL.ES.K.3.** Ask and answer questions in order to seek help, get information, or clarify something that is not understood.

**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.

**Explanation of how interdisciplinary standards connect to the unit:**

**ELA:** Throughout the unit students will be asked to answer questions about key details in the workbook about a problem. The teacher will prompt the question and will support answering as needed.

**Technology:** Students will use i-ready a digital application to complete tasks related to the unit. Students will complete interactive tutorials, learning games, and unit comprehension checks with teacher assistance.

**Technology Integration (9.4 Standards):**

9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

9.4.2.Cl.1: Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).

9.4.2.TL.1: Identify the basic features of a digital tool and explain the purpose of the tool.

**Explanation of how 9.4 standards connect to the unit:**

Students will use a variety of types of thinking to solve problems throughout the unit. Students will compare and sort objects by observing their attributes which will help develop their critical thinking skills.

Students will be asked to reason quantitatively and abstractly as they think critically to understand other children's explanations. This will help students learn new ideas and perspectives. Students will understand that digital tools have a purpose.

**Stage 2- Assessment Evidence:**

**Assessment:** Children will describe positions and place objects in a given position.

**Formative**

- Comprehension Checks
- Lesson Quiz

|                         |  |
|-------------------------|--|
|                         | <ul style="list-style-type: none"> <li>● Small Group Assessment</li> <li>● Independent Practice</li> </ul>         |
| <b>Summative</b>        | <ul style="list-style-type: none"> <li>● Unit Assessment</li> <li>● Activity-Based Assessment</li> </ul>           |
| <b>Alternative</b>      | <ul style="list-style-type: none"> <li>● Interactive Practice</li> <li>● Conferencing Sessions</li> </ul>          |
| <b>Benchmark</b>        | <ul style="list-style-type: none"> <li>● Fluency Assessment, iReady (twice per year - January and June)</li> </ul> |
| <b>Other (optional)</b> |  |

| <b>Stage 3 - Learning Plan</b>  |  |  |                                    |   |  |   |
|---|--|--|------------------------------------|---|--|---|
| <p><b>Learning Activities:</b></p> <ul style="list-style-type: none"> <li>● Lesson 0</li> <li>● Lesson 1 Describe Position                             <ul style="list-style-type: none"> <li>○ Session 1 Explore listening to and interpreting descriptions involving positional language</li> <li>○ Session 2 Develop the skills of placing objects in a given position.</li> <li>○ Session 3 Develop using positional language to describe where objects are</li> <li>○ Session 4 Refine</li> <li>○ Session 5 Refine the use of words to describe the position of objects</li> <li>○</li> </ul> </li> <li>● Lesson 2 Describe and Compare Lengths and Heights                             <ul style="list-style-type: none"> <li>○ Session 1 Explore attributes of objects</li> <li>○ Session 2 Develop understanding of how to compare the lengths of two objects</li> <li>○ Session 3 Develop understanding of how to compare the heights of two objects</li> <li>○ Session 4 Refine comparing two objects to determine which is longer/shorter or taller/shorter</li> <li>○ Session 5 Refine comparing the</li> </ul> </li> </ul> | <p><b>Differentiation:</b></p> <table border="1" style="width: 100%;"> <tr> <td> <p><b>English Language Learners:</b><br/>The ELL Math Resources Folder is located <a href="#">here</a></p> </td> </tr> <tr> <td> <p><b>Gifted and Talented:</b></p> </td> </tr> <tr> <td> <p><b>Special Education Students:</b></p> </td> </tr> <tr> <td> <p><b>Students with 504 plans:</b></p> </td> </tr> <tr> <td> <p><b>Students at Risk of school failure:</b></p> </td> </tr> </table> <p>Links to <a href="#">Math Differentiation Chart</a> and <a href="#">Accommodations Chart</a></p> | <p><b>English Language Learners:</b><br/>The ELL Math Resources Folder is located <a href="#">here</a></p> | <p><b>Gifted and Talented:</b></p> | <p><b>Special Education Students:</b></p> | <p><b>Students with 504 plans:</b></p> | <p><b>Students at Risk of school failure:</b></p> |
| <p><b>English Language Learners:</b><br/>The ELL Math Resources Folder is located <a href="#">here</a></p>  |  |  |                                    |   |  |   |
| <p><b>Gifted and Talented:</b></p>  |  |  |                                    |   |  |   |
| <p><b>Special Education Students:</b></p>   |  |  |                                    |   |  |   |
| <p><b>Students with 504 plans:</b></p>  |  |  |                                    |   |  |   |
| <p><b>Students at Risk of school failure:</b></p>   |  |  |                                    |   |  |   |

|  |  |
|--|--|
| <ul style="list-style-type: none"><li>○ heights or lengths of two objects</li><li>○</li><li>● Lesson 3 Sort and Count Objects<ul style="list-style-type: none"><li>○ Session 1 Explore sorting objects into categories</li><li>○ Session 2 Develop understanding of sorting objects by attributes and counting the number of objects in each category</li><li>○ Session 3 Develop understanding of sorting objects by attributes</li><li>○ Session 4 Refine sorting objects into categories</li><li>○ Session 5 Refine sorting objects into categories</li></ul></li></ul> |  |
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**Core and Supplementary Instructional Materials****Teacher Pedagogical Resources:**

i-Ready Classroom Mathematics Teacher's Guide Volumes 1 and 2  
iRCM teacher toolbox / i-Ready Centers Library  
i-Ready Digital Mathtools

**Student Materials:**

i-Ready Classroom 2024 Mathematics Student Worktext Volumes 1 and 2, Grade K (2024)  
Hands-on math manipulatives and digital manipulatives  
iPad  
Online Math games  
MyPath online lessons

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| Student eBook<br>Interactive Tutorials |
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**Course: Math Grade K**
**Unit # 2: Numbers to 5, Shapes, and Weight**
**Grade Level(s): Kindergarten**
**Length of Unit: Three weeks and 1 day (16 days)**
**Unit Rationale:**

This unit introduces children to counting, writing, and comparing numbers to 5. It also introduces them to shapes and weight. Children draw to show what they already know about these topics. They then reflect on what they learned about these topics at the end of the unit.

**Stage 1 - Desired Results**
**Enduring Understandings:**

*Students will understand that...*

- Counting is an important mathematical skill. Knowing how to count a group of objects will allow you to know how many objects are in a group.
- Each number represents each object in a group.
- Using what you know about counting you can build sets.

**Essential Questions:**

- Name something you may need to count. Why would you need to count it?
- How can you show how many objects are in a group?

**Content:**

*Students will know...*

- How to count objects
- Names for solid shapes
- Number names 0-5
- Counting 0-5
- Comparing within 5
- Making 3,4,5

**Skills:**

*Students will be able to...*

- Count with one-to-one correspondence
- Show, write, and count numbers 0-5
- Name and describe solid shapes
- Compare two numbers 0 to 5 using words more, less, or same
- Compare the weights of two objects to tell which is heavier or lighter
- Use math vocabulary to describe numbers, shapes, and weight
- Understand that one more refers to the next

|  |                                 |
|--|---------------------------------|
|  | number in the counting sequence |
|--|---------------------------------|

- Understand 0 as representing no objects

## NJ Student Learning Standards - Mathematics

### Content Standards: 2023 NJSLS-Mathematics (K-12)

#### K.CC.A. Know number names and the count sequence.

**K.CC.A.1.** Count to 100 by ones and by tens.

**K.CC.A.3** Write numerals from 0-20. Represent a number of objects with a written numeral 0-20.

(With 0 representing a count of no objects.)

#### K.CC.B. Count to tell the number of objects.

**K.CC.B.4a.** 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.

**K.CC.B.4b.** 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.

**K.CC.B.4c.** Understand that each successive number name refers to a quantity that is one larger.

**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.

#### K.CC.C. Compare numbers.

- **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.

- **K.CC.C.7.** Compare two numbers between 1 and 10 presented as written numerals.

**K.OA.A.1** Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (eg. claps), acting out situations, verbal explanations, expressions, or equations.

**K.OA.A.2** Solve addition and subtraction word problems, and add and subtract within 10, eg. by using objects or drawing to represent the problem.

**K.OA.A.5** Fluently add and subject within 5.

**K.M.A.1:** Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

**K.M.A.2:** Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.

#### Focus Standard(s): Geometry

**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.

**K.G.A.2:** Correctly name shapes regardless of their orientations or overall size.

### The Standards for Mathematical Practice:

1. Make sense of problems and persevere in solving them.
5. Use appropriate tools strategically.

### Career Education (Career Readiness, Life Literacies, and Key Skills Practices and 9.2 Standards)

9.1.2.CAP.1: Make a list of different types of jobs and describe the skills associated with each job.

#### CLKS Practices:

1. Demonstrate creativity and innovation
2. Utilize critical thinking to make sense of problems and persevere in solving them

#### Connected Careers:

architect

#### Explanation of how 9.2 standards connect to the unit:

As students learn about the unit position, length, height, and sorting they will be able to come up with a list of jobs related to the topic. They will then describe skills that are associated with each job they came up with.

#### Explanation of how CLKs connect to the unit:

Creativity and innovation will be demonstrated as students start exploring shapes. Students will start noticing their attributes and connecting them to real world objects. Students will use critical thinking to start to learn numbers to 5. With support they will begin identifying more, less, and the same.

#### Explanation of how Connected Careers connect to the unit

In this lesson students learn about numbers to 5, shapes, and weight. Architects use these math skills every day as they design and plan houses and buildings.

### Interdisciplinary Standards

**RI.CR.K.1** With prompting and support, ask and answer questions about key details in an informational text (e.g., who, what, where, when, why, how).

**K-LS1-1** Use observations to describe patterns in the natural world in order to answer scientific questions.

#### Explanation of how interdisciplinary standards connect to the unit:

ELA: Students will be given the opportunity to discuss their answers with partners and the whole class. Students will be able to ask and answer questions about peers' answers.

Science: Students will observe patterns in the natural world as they practice counting to 5. Students will also find shapes represented in the natural world.

**Technology Integration (9.4 Standards):**

9.4.2.CI.1: Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).

9.4.2.CI.2: Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).

9.4.2.TL.1: Identify the basic features of a digital tool and explain the purpose of the tool.

**Explanation of how 9.4 standards connect to the unit:**

Students will demonstrate openness to new ideas and perspectives as they listen to peers share their thinking. Students will have opportunities to work with a partner and participate in whole class discussions. Students will demonstrate originality and inventiveness in their work as they learn about shapes. Students will be asked to find real-world objects that match the solid shapes. Students will be using digital tools.

**Stage 2- Assessment Evidence:**

**Assessment:**

|                            |   |
|----------------------------|---|
| <b>Formative</b>           | <ul style="list-style-type: none"> <li>● Comprehension Checks</li> <li>● Lesson Quiz</li> <li>● Small Group Assessment</li> <li>● Independent Practice</li> </ul> |
| <b>Summative</b>           | <ul style="list-style-type: none"> <li>● Unit Assessment</li> <li>● Activity-Based Assessment</li> </ul>  |
| <b>Alternative</b>         | <ul style="list-style-type: none"> <li>● Interactive Practice</li> <li>● Conferencing Sessions</li> </ul>   |
| <b>Benchmark</b>           | <ul style="list-style-type: none"> <li>● Fluency Assessment , iReady Diagnostic (twice a year, January and June))</li> </ul>                                      |
| <b>Other</b><br>(optional) |   |

**Stage 3 - Learning Plan**

**Learning Activities:**

**Lesson 4: Count, Show, and Write Numbers to 5**

- Session 1 Explore
- Session 2 Develop
- Session 3 Develop
- Session 4 Refine
- Session 5 Refine

**Lesson 5: Compare Numbers to 5**

**Differentiation:**

**English Language Learners:**

The ELL Math Resources Folder is located [here](#)

**Gifted and Talented:**

**Special Education Students:**

- Session 1 Explore
- Session 2 Develop
- Session 3 Develop
- Session 4 Refine
- Session 5 Refine

### Lesson 6: Three-Dimensional Shapes and Weight

- Session 1 Explore
- Session 2 Develop
- Session 3 Develop
- Session 4 Refine
- Session 5 Refine

Students with 504 plans:

Students at Risk of school failure:

Links to [Math Differentiation Chart](#) and [Accommodations Chart](#)

### Core and Supplementary Instructional Materials

#### Teacher Pedagogical Resources:

i-Ready Classroom Mathematics Teacher's Guide Volumes 1 and 2  
iRCM teacher toolbox / i-Ready Centers Library  
i-Ready Digital Mathtools

#### Student Materials:

i-Ready Classroom 2024 Mathematics Student Worktext Volumes 1 and 2, Grade K (2024)  
Hands-on math manipulatives and digital manipulatives  
iPad  
Online Math games  
MyPath online lessons  
Student eBook  
Interactive Tutorials

#### Notes:

#### Inclusion of Climate Change Opportunities

**K.DL.A.1** Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (Clarification: Limit category counts to be less than or equal to 10)

Climate Change Example: With prompting and support, students may ask and answer questions about objects that may be reused, objects that may be recycled, and objects that must be placed in the trash. Students may classify used objects into those categories with no more than 10 objects in each category. Students may count the number of objects in each category and sort the categories by count.

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| <b>Course: Math Grade K</b>   |  |
| <b>Unit # 3: Addition and Subtraction Within 5 and Shapes</b>   |  |
| <b>Grade Level(s): Kindergarten</b>   | <b>Length of Unit: Four weeks and 1 day (21 days)</b>  |
| <p><b>Unit Rationale:</b><br/>         This unit introduces children to adding and subtracting within 5. It also introduces them to two-dimensional shapes. Children draw to show what they already know about these topics. They then reflect on what they learned about these topics at the end of the unit.</p>  |  |
| <b>Stage 1 - Desired Results</b>  |  |
| <p><b>Enduring Understandings:</b></p> <p><i>Students will understand that...</i></p> <ul style="list-style-type: none"> <li>● When you join or put together groups, you are adding.</li> <li>● When you separate or take away groups, you are subtracting.</li> <li>● Two-dimensional shapes have attributes that can be described</li> </ul>  | <p><b>Essential Questions:</b></p> <ul style="list-style-type: none"> <li>● Name a shape you know. What does the shape look like?</li> <li>● What objects in the classroom have that shape?</li> </ul>   |
| <p><b>Content:</b></p> <p><i>Students will know...</i></p> <ul style="list-style-type: none"> <li>● How to identify shapes as flat or solid</li> <li>● The words to name a shape and describe position</li> <li>● Adding within 5</li> <li>● Subtracting within 5</li> <li>● Practicing facts to 5</li> <li>● Adding within 10</li> <li>● Finding the missing parts of 10</li> <li>● Subtracting within 10</li> <li>● Adding and subtracting word problems to 10</li> <li>● Figuring out word problems with both addends unknown</li> </ul> | <p><b>Skills:</b></p> <p><i>Students will be able to...</i></p> <ul style="list-style-type: none"> <li>● Use finders or manipulatives to add two numbers within 5</li> <li>● Tell and solve add-to story problems</li> <li>● Determine whether a story problem calls for addition or subtraction</li> <li>● Identify and name two-dimensional shapes regardless of orientation or size</li> <li>● Describe attributes of two-dimensional shapes</li> <li>● Use fingers or manipulatives to subtract two numbers within 5</li> <li>● Use math vocabulary to describe addition, subtraction, and two dimensional shapes</li> </ul> |

**NJ Student Learning Standards - Mathematics****Content Standards: 2023 NJSLS-Mathematics (K-12)****K.CC.A. Know number names and the count sequence.**

**K.CC.A.3** Write numerals from 0-20. Represent a number of objects with a written numeral 0-20. (With 0 representing a count of no objects.)

**K.CC.B. Count to tell the number of objects.**

**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.

**K.OA.A.1** Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (eg. claps), acting out situations, verbal explanations, expressions, or equations.

**K.OA.A.2** Solve addition and subtraction word problems, and add and subtract within 10, eg. by using objects or drawing to represent the problem.

**K.OA.A.3** Decompose numbers less than or equal to 10 into pairs in more than one way.

**K.OA.A.4** For any number from 1-9, find the number that makes 10 when added to the given number.

**K.OA.A.5** Fluently add and subtract within 5.

**Focus Standard(s): Geometry**

**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.

**K.G.A.2:** Correctly name shapes regardless of their orientations or overall size.

**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).

**The Standards for Mathematical Practice:**

1. Make sense of problems and persevere in solving them.
3. Construct viable arguments and critique the reasoning of others.

**Career Education (Career Readiness, Life Literacies, and Key Skills Practices and 9.2 Standards)**

9.1.2.CAP.1: Make a list of different types of jobs and describe the skills associated with each job.

**CLKS Practices:)**

1. Demonstrate creativity and innovation
2. Utilize critical thinking to make sense of problems and persevere in solving them

**Connected Careers:**

Cashier

**Explanation of how 9.2 standards connect to the unit:**

As students learn about the unit position, length, height, and sorting they will be able to come up with a list of jobs related to the topic. They will then describe skills that are associated with each job they came up with.

**Explanation of how CLKs connect to the unit:**

Students will demonstrate creativity and innovation as they begin to learn about story problems. Students will create their own stories and experiences to explain the mathematical relationship. Students will utilize critical thinking as they are introduced to addition and subtraction. Students will use fingers and manipulatives to show their understanding.

**Explanation of how Connected Careers connect to the unit:**

In this lesson students learn about adding and subtracting within 5 and shapes. Cashiers use these math skills every day. They have to know how much money to take and to give back to the customer.

**Interdisciplinary Standards**

**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.

**RI.CR.K.1** With prompting and support, ask and answer questions about key details in an informational text (e.g., who, what, where, when, why, how).

**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.

**Explanation of how interdisciplinary standards connect to the unit:**

**ELA:** Throughout the unit students will be asked to answer questions about key details in the workbook about a problem. The teacher will prompt the question and will support answering as needed.

**Technology:** Students will use i-ready a digital application to complete tasks related to the unit. Students will complete interactive tutorials, learning games, and unit comprehension checks with teacher assistance.

**Technology Integration (9.4 Standards):**

9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

9.4.2.Cl.1: Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).

**Explanation of how 9.4 standards connect to the unit:**

Students will use a variety of types of things to problem solve addition and subtraction equations. Students will use their fingers and a variety of manipulatives to help them solve problems. Students will demonstrate openness to new ideas and perspectives as they share addition and subtraction stories within 5 with a partner. Partners will have to support one another's ideas.

| <b>Stage 2- Assessment Evidence:</b> |   |
|--------------------------------------|---|
| <b>Assessment:</b>                   |   |
| <b>Formative</b>                     | <ul style="list-style-type: none"> <li>● Comprehension Checks</li> <li>● Lesson Quiz</li> <li>● Small Group Assessment</li> <li>● Independent Practice</li> </ul> |
| <b>Summative</b>                     | <ul style="list-style-type: none"> <li>● Unit Assessment</li> <li>● Activity-Based Assessment</li> </ul>  |
| <b>Alternative</b>                   | <ul style="list-style-type: none"> <li>● Interactive Practice</li> <li>● Conferencing Sessions</li> </ul>   |
| <b>Benchmark</b>                     | <ul style="list-style-type: none"> <li>● Fluency Assessment, iReady Diagnostic (January, June)</li> </ul>   |
| <b>Other (optional)</b>              |   |

| <b>Stage 3 - Learning Plan</b>  |   |   |                             |                                    |                                 |  |
|---|---|---|-----------------------------|------------------------------------|---------------------------------|--|
| <p><b>Learning Activities:</b></p> <ul style="list-style-type: none"> <li>● Lesson 7                             <ul style="list-style-type: none"> <li>○ Session 1 Explore counting to find totals within 5</li> <li>○ Session 2 Develop modeling addition problems</li> <li>○ Session 3 Develop facility with adding within 5</li> <li>○ Session 4 Refine finding totals within 5</li> <li>○ Session 5 Refine understanding of addition</li> </ul> </li> <li>● Lesson 8                             <ul style="list-style-type: none"> <li>○ Session 1 Explore two-dimensional shapes that make the faces of three-dimensional shapes</li> <li>○ Session 2 Develop identifying and drawing flat shapes</li> </ul> </li> </ul> | <p><b>Differentiation:</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;"><b>English Language Learners:</b><br/><i>The ELL Math Resources Folder is located <a href="#">here</a></i></td> </tr> <tr> <td style="padding: 5px;"><b>Gifted and Talented:</b></td> </tr> <tr> <td style="padding: 5px;"><b>Special Education Students:</b></td> </tr> <tr> <td style="padding: 5px;"><b>Students with 504 plans:</b></td> </tr> <tr> <td style="padding: 5px;"><b>Students at Risk of school failure:</b></td> </tr> </table> <p>Links to <a href="#">Math Differentiation Chart</a> and <a href="#">Accommodations Chart</a></p> | <b>English Language Learners:</b><br><i>The ELL Math Resources Folder is located <a href="#">here</a></i> | <b>Gifted and Talented:</b> | <b>Special Education Students:</b> | <b>Students with 504 plans:</b> | <b>Students at Risk of school failure:</b> |
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| <b>Gifted and Talented:</b>   |   |   |                             |                                    |                                 |  |
| <b>Special Education Students:</b>  |   |   |                             |                                    |                                 |  |
| <b>Students with 504 plans:</b>   |   |   |                             |                                    |                                 |  |
| <b>Students at Risk of school failure:</b>  |   |   |                             |                                    |                                 |  |

## BES Mathematics Grade K - 2024.docx

- Session 3 Develop facility with decomposing numbers to 5
- Session 4 Refine naming two-dimensional shapes
- Session 5 understanding of two-dimensional shapes
- Lesson 9
  - Session 1 Explore the results of taking away
  - Session 2 Develop an understanding of subtraction
  - Session 3 Develop an understanding that taking away results in less
  - Session 4 Refine representing take-away situations and finding how many are left
  - Session 5 Refine understanding of making a model to represent taking away

**Core and Supplementary Instructional Materials****Teacher Pedagogical Resources:**

i-Ready Classroom Mathematics Teacher's Guide Volumes 1 and 2  
 iRCM teacher toolbox / i-Ready Centers Library  
 i-Ready Digital Mathtools

**Student Materials:**

i-Ready Classroom 2024 Mathematics Student Worktext Volumes 1 and 2, Grade K (2024)  
 Hands-on math manipulatives and digital manipulatives  
 iPad  
 Online Math games  
 MyPath online lessons  
 Student eBook  
 Interactive Tutorials

**Notes:****Inclusion of Climate Change Opportunities**

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.

*Climate Change Example: Students may use counters when adding to find the total number of trees that they and a partner observed (e.g., from their front door, in a backyard, from a classroom window). With prompting and support, they may ask and answer questions about how trees may reduce the warming effect of sunlight.*

## Course: Math Grade K

### Unit # 4: Number to 10 and Shapes

**Grade Level(s): Kindergarten**

**Length of Unit: Five weeks and 1 day (26 days)**

#### Unit Rationale:

This unit introduces children to counting, writing, and comparing numbers to 10. It also introduces them to composing shapes and finding number partners for 10.

#### Stage 1 - Desired Results

#### Enduring Understandings:

*Students will understand that...*

- You can put together two or more shapes to make larger shapes
- You can compare two numbers to decide if one number is greater than, less than, or equal to the other

#### Essential Questions:

- What are some ways you can show 5?
- How can you use what you know about 5 to show 6?

#### Content:

*Students will know...*

- You can put together two or more shapes to make larger shapes
- Adding within 10
- Finding the missing parts of 10
- Subtracting within 10
- Adding and subtracting word problems to 10
- Number partners

#### Skills:

*Students will be able to...*

- Show, write, and count numbers 6 to 10.
- Compare two numbers 1 to 10 using the terms greater than, less than, or equal to
- Put together two dimensional shapes to compose larger shapes
- Put together three-dimensional shapes to compose larger shapes
- Compose and decompose 10
- Find a missing number partner for 10

- Write equations to represent number partners for 10
- Use math vocabulary to describe numbers and shapes

## NJ Student Learning Standards - Mathematics

### Content Standards: 2023 NJSL-Mathematics (K-12)

#### K.CC.A. Know number names and the count sequence.

**K.CC.A.3** Write numerals from 0-20. Represent a number of objects with a written numeral 0-20. ( With 0 representing a count of no objects.

#### K.CC.B. Count to tell the number of objects.

**K.CC.B.4:** Understand the relationship between numbers and quantities; connect counting to cardinality.

**K.CC.B.4a:** 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.

**K.CC.B.4b:** 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.

**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.

**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.

**K.OA.A.1** Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (eg. claps), acting out situations, verbal explanations, expressions, or equations.

**K.OA.A.2** Solve addition and subtraction word problems, and add and subtract within 10, eg. by using objects or drawing to represent the problem.

**K.OA.A.3** Decompose numbers less than or equal to 10 into pairs in more than one way.

**K.OA.A.4** For any number from 1-9, find the number that makes 10 when added to the given number.

**K.OA.A.5** Fluently add and subtract within 5.

#### Focus Standard(s): Geometry

**K.G.B.5:** Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

**K.G.B.6:** Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”.

#### The Standards for Mathematical Practice:

1. Make sense of problems and persevere in solving them.
5. Use appropriate tools strategically.

#### Career Education (Career Readiness, Life Literacies, and Key Skills Practices and 9.2 Standards)

**9.2.2.CAP.1:** Make a list of different types of jobs and describe the skills associated with each job

**CLKS Practices:**

1. Demonstrate creativity and innovation
2. Utilize critical thinking to make sense of problems and persevere in solving them

**Connected Careers:**

Scientist

**Explanation of how 9.2 standards connect to the unit:**

As students learn about the unit position, length, height, and sorting they will be able to come up with a list of jobs related to the topic. They will then describe skills that are associated with each job they came up with.

**Explanation of how CLKs connect to the unit:**

Students will demonstrate creativity and innovation as they share with peers how they solved the problem. Students will share different perspectives for solving the same problem. Students will utilize critical thinking as they begin to understand quantities within 10 by finding number partners to 10. Students will use a varieties of tools to find the number of partners.

**Explanation of how Connected Careers connect to the unit:**

In this lesson students learn about Numbers to 10 and Shapes. Scientists use these math skills every day as they have to be able measure liquids in beakers.

**Interdisciplinary Standards**

**RI.CR.K.1** With prompting and support, ask and answer questions about key details in an informational text (e.g., who, what, where, when, why, how).

**K-LS1-1** Use observations to describe patterns in the natural world in order to answer scientific questions.

**Explanation of how interdisciplinary standards connect to the unit:**

**ELA:** Throughout the unit students will be asked to answer questions about key details in the workbook about a problem. The teacher will prompt the question and will support answering as needed.

**Science:** Students will observe patterns within 10. Students will use the natural world to count to 10.

**Technology Integration /9.4 Standards:**

9.4.2.Cl.1: Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).

9.4.2.Cl.2: Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).

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.

**Explanation of how 9.4 standards connect to the unit:**

Students will demonstrate openness to new ideas and perspectives as they share their reasoning with each other. Students will explain their ideas and ask their classmates if they understand or have any questions. Students will demonstrate originality and inventiveness as they begin using shapes to build other shapes by aligning sides. Students will compose shapes from other shapes. Students will understand that individuals use computing devices to perform a variety of tasks accurately and quickly.

**Stage 2- Assessment Evidence:**

| Assessment:             |   |
|-------------------------|---|
| <b>Formative</b>        | <ul style="list-style-type: none"> <li>● Comprehension Checks</li> <li>● Lesson Quiz</li> <li>● Small Group Assessment</li> <li>● Independent Practice</li> </ul> |
| <b>Summative</b>        | <ul style="list-style-type: none"> <li>● Unit Assessment</li> <li>● Activity-Based Assessment</li> </ul>  |
| <b>Alternative</b>      | <ul style="list-style-type: none"> <li>● Interactive Practice</li> <li>● Conferencing Sessions</li> </ul>   |
| <b>Benchmark</b>        | <ul style="list-style-type: none"> <li>● Fluency Assessment, i-Ready Diagnostic (January, June)</li> </ul>  |
| <b>Other (optional)</b> |   |

**Stage 3 - Learning Plan**

| Learning Activities:   | Differentiation:   |   |                             |                                    |                                 |  |
|--|--|---|-----------------------------|------------------------------------|---------------------------------|--|
| <ul style="list-style-type: none"> <li>● Lesson 11                             <ul style="list-style-type: none"> <li>○ Session 1 Explore using fingers to show numbers up to 10</li> <li>○ Session 2 Develop understanding of using a 10-frame to count</li> <li>○ Session 3 Develop skills in writing numbers 6 to 10</li> <li>○ Session 4 Refine writing numbers 6 to 10</li> <li>○ Session 5 Refine understanding that numbers represent quantities</li> </ul> </li> <li>Lesson 12                             <ul style="list-style-type: none"> <li>○ Session 1 Explore visually comparing groups of up to 10 objects</li> </ul> </li> </ul> | <table border="1"> <tr> <td><b>English Language Learners:</b><br/><i>The ELL Math Resources Folder is located <a href="#">here</a></i></td> </tr> <tr> <td><b>Gifted and Talented:</b></td> </tr> <tr> <td><b>Special Education Students:</b></td> </tr> <tr> <td><b>Students with 504 plans:</b></td> </tr> <tr> <td><b>Students at Risk of school failure:</b></td> </tr> </table> | <b>English Language Learners:</b><br><i>The ELL Math Resources Folder is located <a href="#">here</a></i> | <b>Gifted and Talented:</b> | <b>Special Education Students:</b> | <b>Students with 504 plans:</b> | <b>Students at Risk of school failure:</b> |
| <b>English Language Learners:</b><br><i>The ELL Math Resources Folder is located <a href="#">here</a></i>  |  |   |                             |                                    |                                 |  |
| <b>Gifted and Talented:</b>  |  |   |                             |                                    |                                 |  |
| <b>Special Education Students:</b>   |  |   |                             |                                    |                                 |  |
| <b>Students with 504 plans:</b>  |  |   |                             |                                    |                                 |  |
| <b>Students at Risk of school failure:</b>   |  |   |                             |                                    |                                 |  |

- Session 2 Develop understanding of comparing numbers using a number path
- Session 3 Develop understanding of comparing written numbers 1 to 10
- Session 4 Refine comparing numbers from 1 to 10
- Session 5 Refine understanding of comparing groups of objects and numbers 1 to 10
- Lesson 13
  - Session 1 Explore attributes to two-dimensional shapes
  - Session 2 Develop composing two-dimensional shapes from other two dimensional shapes
  - Session 3 Develop composing three-dimensional shapes from other three-dimensional shapes
  - Session 4 Refine putting together two flat shapes to compose a new flat shape
  - Session 5 Refine composing flat shapes
- Lesson 14
  - Session 1 Explore decomposing 10 into two or more parts
  - Session 2 Develop an understanding of number partners for 10
  - Session 3 Develop an understanding of identifying number partners for 10
  - Session 4 Refine recognize number partners for 10 in different models
  - Session 5 Refine understanding of number partners for 10
- Lesson 15
  - Session 1 Explore patterns in number partners for 10
  - Session 2 Develop understanding of composing number partners for 10
  - Session 3 Develop fluency with number partners for 10
  - Session 4 Refine recognizing number partners for 10 in different models
  - Session 5 Refine understanding of number partners for 10

Links to [Math Differentiation Chart](#) and [Accommodations Chart](#)

|  |  |
|--|--|
|  |  |
|--|--|

### Core and Supplementary Instructional Materials

#### Teacher Pedagogical Resources:

i-Ready Classroom Mathematics Teacher's Guide Volumes 1 and 2  
iRCM teacher toolbox / i-Ready Centers Library  
i-Ready Digital Mathtools

#### Student Materials:

i-Ready Classroom 2024 Mathematics Student Worktext Volumes 1 and 2, Grade K (2024)  
Hands-on math manipulatives and digital manipulatives  
iPad  
Online Math games  
MyPath online lessons  
Student eBook  
Interactive Tutorials

## Course: Math Grade K

### Unit # 5: Numbers to 100

Grade Level(s): Kindergarten

Length of Unit: Four weeks and 1 day (21 days)

#### Unit Rationale:

This unit introduces children to counting objects and writing numbers to 20. It also introduces them to counting to 100 as well as decomposing 6 to 9.

#### Stage 1 - Desired Results

#### Enduring Understandings:

*Students will understand that...*

- Teen numbers are numbers 11-19.
- Teen numbers are made of ten ones and some more ones.
- Using what you know about counting by tens will help you learn the sequence all the way to 100.

#### Essential Questions:

- When might you need to count more than 10 objects?
- What do you know about counting more than 10?

Content:

Skills:

|  |   |
|--|---|
| <p><i>Students will know...</i></p> <ul style="list-style-type: none"> <li>● Teen numbers</li> <li>● Counting Teen numbers</li> <li>● Making Teen numbers</li> <li>● Counting to 100 by tens</li> <li>● Counting to 100 by ones</li> </ul> | <p><i>Students will be able to...</i></p> <ul style="list-style-type: none"> <li>● Count, read, and write numbers 11 to 20</li> <li>● Count 100 by 1s and by 10s</li> <li>● Count on from any number less than 100</li> <li>● Decompose 6 and 7 into number partners</li> <li>● Write equations to represent number partners for 6 and 7</li> <li>● Decompose 8 and 9 into number partners</li> <li>● Write equations to represent number partners for 8 and 9</li> <li>● Use math vocabulary to describe counting, composing, and decomposing numbers</li> </ul> |
|--|---|

## **NJ Student Learning Standards - Mathematics**

### **Content Standards: 2023 NJSL-Mathematics (K-12)**

#### **K.CC.A. Know number names and the count sequence.**

**K.CC.A.1.** Count to 100 by ones and by tens.

**K.CC.A.2** Count forward beginning from a given number within the known sequence.

**K.CC.A.3** Write numerals from 0-20. Represent a number of objects with a written numeral 0-20. (

With 0 representing a count of no objects.

#### **K.CC.B. Count to tell the number of objects.**

· **K.CC.B.4a.** 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.

· **K.CC.B.4b.** 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.

· **K.CC.B.4c.** Understand that each successive number name refers to a quantity that is one larger.

· **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.

**K.NBT.A.1** Compose and decompose numbers from 11 -19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by 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.

#### **The Standards for Mathematical Practice:**

1. Make sense of problems and persevere in solving them.

5. Use appropriate tools strategically.

### **Career Education (Career Readiness, Life Literacies, and Key Skills Practices and 9.2 Standards)**

#### **CLKS Practices:**

3. Demonstrate creativity and innovation

4. Utilize critical thinking to make sense of problems and persevere in solving them

**Connected Careers:**

accountant

**Explanation of how CLKs connect to the unit:**

Students will demonstrate creativity and innovation as they collect, organize, and interpret data. Students will create a shopping list to create their garden.

Students will utilize critical thinking as they learn how to compose and decompose numbers. Students will explore number combinations and strategies to build fact fluency.

**Explanation of how Connected Careers connect to the unit:**

In this lesson students learn about numbers to 100. Accountants need to know how to write and read numbers in order to help people with their finances.

**Interdisciplinary Standards**

**RI.CR.K.1.** With prompting and support, ask and answer questions about key details in an informational text (e.g., who, what, where, when, why, how).

**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.

**8.1.2.CS.2:** Explain the functions of common software and hardware components of computing systems.

**Explanation of how interdisciplinary standards connect to the unit:**

**ELA:** Throughout the unit students will be asked to answer questions about key details in the workbook about a problem. The teacher will prompt the question and will support answering as needed.

**Technology:** Students will use i-READY a digital application to complete tasks related to the unit. Students will complete interactive tutorials, learning games, and unit comprehension checks with teacher assistance.

**Technology Integration (9.4 Standards):**

9.4.2.CT.2: Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3).

9.4.2.CI.1: Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2)

**Explanation of how 9.4 standards connect to the unit:**

Students will identify possible approaches and resources to execute a plan to show 100 objects. Students will figure out ways and resources to make a set of 100 things.

Students will demonstrate openness to new ideas and perspectives as they work with a partner to create shapes that use a certain number of blocks. Students will work together to come up with ways to create

shapes.

**Stage 2- Assessment Evidence:**

**Assessment:**

|                            |   |
|----------------------------|---|
| <b>Formative</b>           | <ul style="list-style-type: none"> <li>● Comprehension Checks</li> <li>● Lesson Quiz</li> <li>● Small Group Assessment</li> <li>● Independent Practice</li> </ul> |
| <b>Summative</b>           | <ul style="list-style-type: none"> <li>● Unit Assessment</li> <li>● Activity-Based Assessment</li> </ul>  |
| <b>Alternative</b>         | <ul style="list-style-type: none"> <li>● Interactive Practice</li> <li>● Conferencing Sessions</li> </ul>   |
| <b>Benchmark</b>           | <ul style="list-style-type: none"> <li>● Fluency Assessment, i-Ready Diagnostic (January)</li> </ul>  |
| <b>Other</b><br>(optional) |   |

**Stage 3 - Learning Plan**

**Learning Activities:**

- Lesson 16
  - Session 1 Explore counting and identifying teen quantities
  - Session 2 Develop counting, reading, and writing numbers from 11 to 20
  - Session 3 Develop counting, reading writing, and identifying numbers 11 to 20
  - Session 4 Refine writing numbers 11 to 20
  - Session 5 Refine counting numbers of objects from 11 to 20
- Lesson 17
  - Session 1 Explore counting up to 100 objects by 10s
  - Session 2 Develop Counting groups of up to 100 objects by 1s
  - Session 3 Develop counting on up to 100

**Differentiation:**

**English Language Learners:**

*The ELL Math Resources Folder is located [here](#)*

**Gifted and Talented:**

**Special Education Students:**

**Students with 504 plans:**

**Students at Risk of school failure:**

Links to [Math Differentiation Chart](#) and [Accommodations Chart](#)

## BES Mathematics Grade K - 2024.docx

- Session 4 Refine counting up to 100 by 1s
- Session 5 Refine counting by 1s and 10s up to 100
- Lesson 18
  - Session 1 Explore the numbers 6 and 7 in the real world
  - Session 2 Develop finding number patterns for 6 and 7
  - Session 3 Develop fluency with decomposing the numbers 6 and 7
  - Session 4 decomposing 6 and 7 in different ways using drawings and equations
  - Session 5 Refine understanding of numbers partners for 6 and 7
- Lesson 19
  - Session 1 Explore the numbers 8 and 9 in the real world
  - Session 2 Develop understanding of composing and decomposing 8 and 9
  - Session 3 Develop finding number partners for 8 and 9
  - Session 4 Refine finding number partners for 8 and 9
  - Session 5 Refine understanding of number partners for 8 and 9

**Core and Supplementary Instructional Materials****Teacher Pedagogical Resources:**

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 iRCM teacher toolbox / i-Ready Centers Library  
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**Student Materials:**

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 Student eBook

|                       |
|-----------------------|
| Interactive Tutorials |
|-----------------------|

|  |  |
|--|--|
| <b>Course: Math Grade K</b>  |  |
| <b>Unit # 6: Addition and Subtraction Within 10</b>  |  |
| <b>Grade Level(s): Kindergarten</b>  | <b>Length of Unit: Three weeks and 1 day (16 days)</b> |
| <b>Unit Rationale:</b><br>This unit introduces children to adding and subtracting within 10. It also introduces them to solving addition and |  |

subtraction story problems within 10.

### Stage 1 - Desired Results

#### Enduring Understandings:

*Students will understand that...*

- When you join or put together groups, you are adding.
- When you separate or take away groups, you are subtracting.

#### Essential Questions:

- What happens to a group of objects when you add more?
- What are some tools that can help you add?

#### Content:

*Students will know...*

- Adding within 5
- Subtracting within 5
- Practicing facts to 5
- Adding within 10
- Finding the missing parts of 10
- Subtracting within 10
- Adding and subtracting word problems to 10
- Figuring out word problems with both addends unknown

#### Skills:

*Students will be able to...*

- Use manipulatives to add numbers within 10
- Write equations to show addition
- Use manipulatives to subtract two numbers within 10
- Write equations to show subtraction
- Decide whether to add or subtract to solve a story problem
- Solve addition and subtraction story problems within 10
- Draw pictures or write equations to represent story problems
- Use math vocabulary to describe addition and subtraction

### NJ Student Learning Standards - Mathematics

**Content Standards:** 2023 NJSLS-Mathematics (K-12)

#### **K.CC.A. Know number names and the count sequence.**

**K.CC.A.3** Write numerals from 0-20. Represent a number of objects with a written numeral 0-20. ( With 0 representing a count of no objects.

#### **K.CC.B. Count to tell the number of objects.**

**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.

**K.OA.A.1** Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (eg. claps), acting out situations, verbal explanations, expressions, or equations.

**K.OA.A.2** Solve addition and subtraction word problems, and add and subtract within 10, eg. by using objects or drawing to represent the problem.

**K.OA.A.3** Decompose numbers less than or equal to 10 into pairs in more than one way.

**K.OA.A.4** For any number from 1-9, find the number that makes 10 when added to the given number.

**K.OA.A.5** Fluently add and subtract within 5.

**The Standards for Mathematical Practice:**

2. Reason abstractly and quantitatively.
5. Use appropriate tools strategically.

**Career Education (Career Readiness, Life Literacies, and Key Skills Practices and 9.2 Standards)**

**CLKS Practices:**

5. Demonstrate creativity and innovation
6. Utilize critical thinking to make sense of problems and persevere in solving them

**Connected Careers:**

software engineer

**Explanation of how CLKs connect to the unit:**

Students demonstrate creativity and innovation as they use pictures to show and solve story problems. Students will draw pictures to explain their problem solving. Students will utilize critical thinking as they have to describe the steps they used to solve addition and subtraction word problems using steps or sentences. Students will be able to interpret what they are doing and be able to explain it.

**Explanation of how Connected Careers connect to the unit:**

In this lesson students learn about addition and subtraction within 10. Software engineers use these math skills everyday as they perform calculations and import data.

**Interdisciplinary Standards**

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

**RI.CR.K.1** With prompting and support, ask and answer questions about key details in an informational text (e.g., who, what, where, when, why, how).

**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.

**Explanation of how interdisciplinary standards connect to the unit:**

**Life Literacies:** Students will use a variety of ways to solve problems. Students will be able to use counters, manipulatives, number lines, and pictures to help them with addition and subtraction problems.

**ELA:** Throughout the unit students will be asked to answer questions about key details in the workbook about a problem. The teacher will prompt the question and will support answering as needed.

**Technology Integration /9.4 Standards:**

**9.4.2.CT.2:** Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3).

**9.4.2.CI.1:** Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).

**8.1.2.CS.2:** Explain the functions of common software and hardware components of computing systems.

**Explanation of how 9.4 standards connect to the unit:**

Throughout this unit students will be using different approaches and resources to solve problems. Students will use these to model addition and subtraction problems.

Students will demonstrate openness to new ideas and perspectives as they listen and share their responses to solving problems. Students will discuss the question and share their differences in perspectives. Students will use appropriate computer software.

**Stage 2- Assessment Evidence:****Assessment:**

|                             |   |
|-----------------------------|---|
| <b>Formative</b>            | <ul style="list-style-type: none"> <li>● Comprehension Checks</li> <li>● Lesson Quiz</li> <li>● Small Group Assessment</li> <li>● Independent Practice</li> </ul> |
| <b>Summative</b>            | <ul style="list-style-type: none"> <li>● Unit Assessment</li> <li>● Activity-Based Assessment</li> </ul>  |
| <b>Alternative</b>          | <ul style="list-style-type: none"> <li>● Interactive Practice</li> <li>● Conferencing Sessions</li> </ul>   |
| <b>Benchmark</b>            | <ul style="list-style-type: none"> <li>● Fluency Assessment / i-Ready diagnostic in June</li> </ul>   |
| <b>Other<br/>(optional)</b> |   |

**Stage 3 - Learning Plan**

**Learning Activities:**

- Lesson 20
  - Session 1 Explore telling, modeling, and solving add-to and put-together addition problems
  - Session 2 Develop an understanding of addition within 10
  - Session 3 Develop fluency with number patterns within 10
  - Session 4 Refine solving addition problems within 10
  - Session 5 Refine adding within 10
  
- Lesson 21
  - Session 1 Explore telling, modeling, and solving take-away subtraction problems
  - Session 2 Develop an understanding of subtracting within 10
  - Session 3 Develop solving subtraction problems within 10 using manipulatives
  - Session 4 Refine solving subtraction problems within 10
  - Session 5 Refine subtracting within 10
  
- Lesson 22
  - Session 1 Explore the idea that an increase in a quantity is connected to addition and a decrease is connected to subtraction
  - Session 2 Develop solving addition and subtraction story problems by drawing
  - Session 3 Develop telling and solving addition and subtraction story problems
  - Session 4 Refine drawing to represent addition and subtraction story problems
  - Session 5 Refine representing addition and subtraction story problems with drawings and equations

**Differentiation:****English Language Learners:**

*The ELL Math Resources Folder is located [here](#)*

**Gifted and Talented:****Special Education Students:****Students with 504 plans:****Students at Risk of school failure:**

Links to [Math Differentiation Chart](#) and [Accommodations Chart](#)

**Core and Supplementary Instructional Materials****Teacher Pedagogical Resources:**

i-Ready Classroom Mathematics Teacher's Guide Volumes 1 and 2  
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**Course: Math Grade K****Unit # 7: Teen Numbers and Shapes****Grade Level(s): Kindergarten****Length of Unit: Three weeks and 1 day (16 days)****Unit Rationale:**

This Unit introduces children to composing and decomposing teen numbers. It also introduces them to building objects from two-dimensional or from three-dimensional shapes.

**Stage 1 - Desired Results****Enduring Understandings:**

*Students will understand that...*

- Teen numbers are numbers 11-19.
- Teen numbers are made of ten ones and some more ones.
- You can identify shapes as flat or solid.
- You can put shapes together to make larger shapes

**Essential Questions:**

- Name a teen number. What are some ways you could show the teen number?
- How are all teen numbers alike? How are they different?

|   |   |
|---|---|
| <p><b>Content:</b></p> <p><i>Students will know...</i></p> <ul style="list-style-type: none"> <li>● Teen numbers</li> <li>● Counting Teen numbers</li> <li>● Making Teen numbers</li> <li>● Shapes</li> </ul> | <p><b>Skills:</b></p> <p><i>Students will be able to...</i></p> <ul style="list-style-type: none"> <li>● Compose teen numbers from 10 ones and some more ones</li> <li>● Decompose teen numbers into 10 ones and some more ones</li> <li>● Identify shapes as flat or solid</li> <li>● Make pictures with two-dimensional shapes</li> <li>● Build objects with three-dimensional shapes</li> <li>● Write equations to show composing teen numbers</li> <li>● Write equations to show decomposing teen numbers</li> <li>● Use math vocabulary to describe teen numbers and two- and three- dimensional shapes</li> </ul> |
|---|---|

## NJ Student Learning Standards - Mathematics

### Content Standards: 2023 NJSLS-Mathematics (K-12)

#### K.CC.A. Know number names and the count sequence.

**K.CC.A.1.** Count to 100 by ones and by tens.

**K.CC.A.2** Count forward beginning from a given number within the known sequence.

**K.CC.A.3** Write numerals from 0-20. Represent a number of objects with a written numeral 0-20. (With 0 representing a count of no objects).

#### K.CC.B. Count to tell the number of objects.

**K.CC.B.4a.** 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.

**K.CC.B.4b.** 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.

**K.CC.B.4c.** Understand that each successive number name refers to a quantity that is one larger.

**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.

**K.NBT.A.1** Compose and decompose numbers from 11 -19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by 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.

**K.G.A.3:** Identify shapes as two--dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).

**K.G.B.5:** Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

**K.M.B.3:** Understand that certain objects are coins and dollar bills, and that coins and dollar bills represent money. Identify the values of all U.S. coins and the one-dollar bill.

**The Standards for Mathematical Practice:**

1. Make sense of problems and persevere in solving them.
4. Model with mathematics.

**Career Education (Career Readiness, Life Literacies, and Key Skills Practices and 9.2 Standards)**

**9.2.2.CAP.1:** Make a list of different types of jobs and describe the skills associated with each job

**CLKS Practices:**

7. Demonstrate creativity and innovation
8. Utilize critical thinking to make sense of problems and persevere in solving them

**Connected Careers:**

Designer

**Explanation of how 9.2 standards connect to the unit:**

As students learn about the unit position, length, height, and sorting they will be able to come up with a list of jobs related to the topic. They will then describe skills that are associated with each job they came up with.

**Explanation of how CLKs connect to the unit:**

Students will demonstrate creativity and innovation as children use flat shapes to make an animal. Students will use their imagination to put shapes together to make an animal of their choosing.

Students will utilize critical thinking as they start to understand teen numbers. Students will use tools and drawings to compose and decompose teen numbers.

**Explanation of how Connected Careers connect to the unit:**

In this lesson students learn about teen numbers and shapes. Designers use these math skills everyday when they order units of their designs they also use and put together shapes to create their visions.

**Interdisciplinary Standards**

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

**RI.CR.K.1** With prompting and support, ask and answer questions about key details in an informational text (e.g., who, what, where, when, why, how).

**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.

**Explanation of how interdisciplinary standards connect to the unit:**

**Life Literacies:** Students will use a variety of ways to solve problems. Students will be able to use counters,

manipulatives, number lines, and pictures to help them compose and decompose teen numbers.

**ELA:** Throughout the unit students will be asked to answer questions about key details in the workbook about a problem. The teacher will prompt the question and will support answering as needed.

**Technology Integration / 9.4 Standards:**

**9.4.2.CI.2:** Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).

**9.4.2.CI.1:** Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).

**8.1.2.CS.2:** Explain the functions of common software and hardware components of computing systems.

**Explanation of how 9.4 standards connect to the unit:**

Students will demonstrate originality and inventiveness as they use shapes to create objects. Students will use flat shapes and solid shapes to create a picture or model of an object.

Students will demonstrate openness to new ideas and perspectives as they listen and share a concrete representation of a teen number as 10 ones and a group of ones. Students will ask and answer questions about peers' responses. Students will use appropriate computer software.

**Stage 2- Assessment Evidence:**

**Assessment:**

|                         |   |
|-------------------------|---|
| <b>Formative</b>        | <ul style="list-style-type: none"> <li>● Comprehension Checks</li> <li>● Lesson Quiz</li> <li>● Small Group Assessment</li> <li>● Independent Practice</li> </ul> |
| <b>Summative</b>        | <ul style="list-style-type: none"> <li>● Unit Assessment</li> <li>● Activity-Based Assessment</li> </ul>  |
| <b>Alternative</b>      | <ul style="list-style-type: none"> <li>● Interactive Practice</li> <li>● Conferencing Sessions</li> </ul>   |
| <b>Benchmark</b>        | <ul style="list-style-type: none"> <li>● Fluency Assessment ; End-of-year i-Ready Diagnostic</li> </ul>   |
| <b>Other (optional)</b> |   |

**Stage 3 - Learning Plan**

|   |                         |
|---|-------------------------|
| <b>Learning Activities:</b> <ul style="list-style-type: none"> <li>● Lesson 23</li> </ul> | <b>Differentiation:</b> |
|---|-------------------------|

|  |   |   |                             |                                    |                                 |  |
|--|---|---|-----------------------------|------------------------------------|---------------------------------|--|
| <ul style="list-style-type: none"> <li>○ Session 1 Explore making and breaking apart teen numbers</li> <li>○ Session 2 Develop using objects to compose teen numbers</li> <li>○ Session 3 Develop using drawings to decompose teen numbers</li> <li>○ Session 4 Refine composing and decomposing teen numbers</li> <li>○ Session 5 Refine composing and decomposing teen numbers</li> <li>● Lesson 24 <ul style="list-style-type: none"> <li>○ Session 1 Explore naming flat (two-dimensional) and solid (three-dimensional) shapes</li> <li>○ Session 2 Develop combining two-dimensional shapes to make recognizable images</li> <li>○ Session 3 Develop modeling real-world objects with three-dimensional shapes</li> <li>○ Session 4 Refine using two-dimensional shapes to make pictures</li> <li>○ Session 5 Refine making pictures or building objects with flat or solid shapes</li> </ul> </li> <li>● Lesson 25 <ul style="list-style-type: none"> <li>○ Session 1 Explore many ways to represent teen numbers</li> <li>○ Session 2 Develop an understanding of decomposing teen numbers into 10 ones and some more ones</li> <li>○ Session 3 Develop adding 10 ones and some more ones to compose teen numbers</li> <li>○ Session 4 Refine understanding of teen numbers as 10 ones and some more ones</li> <li>○ Session 5 Refine making teen numbers</li> </ul> </li> </ul> | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;"><b>English Language Learners:</b><br/><i>The ELL Math Resources Folder is located <a href="#">here</a></i></td> </tr> <tr> <td style="padding: 5px;"><b>Gifted and Talented:</b></td> </tr> <tr> <td style="padding: 5px;"><b>Special Education Students:</b></td> </tr> <tr> <td style="padding: 5px;"><b>Students with 504 plans:</b></td> </tr> <tr> <td style="padding: 5px;"><b>Students at Risk of school failure:</b></td> </tr> </table> <p style="margin-top: 20px;"><b>Links to <a href="#">Math Differentiation Chart</a> and <a href="#">Accommodations Chart</a></b></p> | <b>English Language Learners:</b><br><i>The ELL Math Resources Folder is located <a href="#">here</a></i> | <b>Gifted and Talented:</b> | <b>Special Education Students:</b> | <b>Students with 504 plans:</b> | <b>Students at Risk of school failure:</b> |
| <b>English Language Learners:</b><br><i>The ELL Math Resources Folder is located <a href="#">here</a></i>  |   |   |                             |                                    |                                 |  |
| <b>Gifted and Talented:</b>  |   |   |                             |                                    |                                 |  |
| <b>Special Education Students:</b>   |   |   |                             |                                    |                                 |  |
| <b>Students with 504 plans:</b>  |   |   |                             |                                    |                                 |  |
| <b>Students at Risk of school failure:</b>   |   |   |                             |                                    |                                 |  |

### Core and Supplementary Instructional Materials

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Online Math games  
MyPath online lessons  
Student eBook  
Interactive Tutorials

**Notes:****Inclusion of Climate Change Opportunities**

K.G.B.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

Climate Change Example: Students may use sticks and clay to model trees and umbrellas and may then draw shapes (e.g., triangle, rectangle) to model those objects. With prompting and support, they may ask and answer questions about how trees and umbrellas may be used to reduce the warming effect of sunlight.