

# Kindergarten Math

## Link Community Charter School

UNITS (8/8 SELECTED)	SUGGESTED DURATION
<input checked="" type="checkbox"/> Unit 1: Math in Our World	18 lessons
<input checked="" type="checkbox"/> Unit 2: Numbers 1-10	23 lessons
<input checked="" type="checkbox"/> Unit 3: Flat Shapes All Around Us	16 lessons
<input checked="" type="checkbox"/> Unit 4: Understanding Addition and Subtraction	19 lessons
<input checked="" type="checkbox"/> Unit 5: Composing and Decomposing Numbers to 10	16 lessons
<input checked="" type="checkbox"/> Unit 6: Numbers 0-20	14 lessons
<input checked="" type="checkbox"/> Unit 7: Solid Shapes All Around Us	17 lessons
<input checked="" type="checkbox"/> Unit 8: Putting It All Together	22 lessons

# Unit 1: Math in Our World

Kindergarten Math - Last Updated on July 26, 2021

## STANDARDS ADDRESSED

### New Jersey (NJSLS) - Kindergarten - Mathematics (2020)

- K.CC
- K.G
- K.G.B
- K.CC.B.4
- K.CC.B
- K.CC.B.4.a
- K.CC.A.1

### New Jersey (NJSLS) - K-12 - Math Practice Standards (2020)

- MA.K-12.4
- MA.K-12.1
- MA.K-12.2

# Unit 1: Math in Our World

Kindergarten Math - Last Updated on July 26, 2021

## DESIRED RESULTS

### Established Goals

In this unit, students explore mathematical tools and notice numbers and quantities around them and build their counting skills. In the last section, students count collections of objects and groups of people, answering “how many of \_\_\_\_ are there?” questions. These questions reinforce the idea that counting is a way to tell how many objects there are. Students are expected to count up to 10 objects by the time they begin the next unit, which will focus more deeply on numbers 1–10. The unit gives students time to learn the structures and routines for centers, to create norms for classroom learning, and to begin to build a mathematical community. Throughout this unit, students are working to create a picture book about quantities and counting in centers.

### Transfer

Students will be able to independently use their learning to...

establish themselves as productive and contributing members of a math community who recognize numbers and quantities in their world.

### Meaning

Big Ideas & Understandings	Essential Questions
<p>Students will understand that...</p> <ul style="list-style-type: none"><li>• being a part of a math community means sharing ideas about math and working with others</li><li>• there are math tools that can be used to count and represent numbers</li><li>• there are rules for using math tools</li><li>• they can count to see if we have enough to meet our needs (one-to-one correspondence)</li></ul>	<p>Students will keep considering...</p> <ul style="list-style-type: none"><li>• How do we share ideas in a math community?</li><li>• What does it look like to use tools in a math community?</li><li>• How can we count and represent numbers?</li><li>• What is counting and how can it be used?</li></ul>

### Acquisition

Knowledge	Skills
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## Unit 1: Math in Our World

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### Acquisition

<p>Students will know...</p> <ul style="list-style-type: none"><li>• the different types of tools we have for math</li><li>• what a member of a math community says/does/is</li><li>• established rules and responsibilities for using math tools</li><li>• how many objects are in a group of up to 4 without counting</li><li>• how to count up to 10</li><li>• how to match one object to one person or image</li></ul>	<p>Students will be skilled at...</p> <ul style="list-style-type: none"><li>• saying the count sequence to 10</li><li>• saying one number for each object</li><li>• Answering how many questions</li><li>• showing quantities on fingers</li><li>• recognizing and naming groups of 1, 2, or 3 objects or images without counting</li><li>• recognizing and naming groups of 4 objects or images without counting</li><li>• identifying groups with the same number of objects (up to 4 objects)</li><li>• explaining what it means to be a part of the math community</li><li>• listing the rules and responsibilities for using math tools</li></ul>
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### ASSESSMENT EVIDENCE (DIAGNOSTIC / FORMATIVE / SUMMATIVE)

## Assessments

Evaluation Criteria	Assessment Evidence
<p>Rubrics/Checklists:</p> <p>Topic A Checkpoint Interview Topic B Checkpoint Interview Topic C Checkpoint Interview Topic D Checkpoint Interview End of Module Interview</p>	<p>Performance Task(s):</p> <p>Create a Picture Book</p>
	<p>Other Evidence:</p> <ul style="list-style-type: none"><li>• Observation</li><li>• Anecdotal evidence</li></ul>

# Unit 1: Math in Our World

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## LEARNING PLAN

### Summary of Key Learning Events and Instruction:

#### Week 1: Section A

Lessons 1-5

Section A Checkpoint Interview (During Centers)

Daily Centers

#### Week 2: Section B and Section C

Lessons 6-9

Section B Checkpoint Interview (During Centers)

Lesson 10

Daily Centers

#### Week 3: Section C and Section D

Lesson 11s

Section C Checkpoint Interview (During Centers)

Lessons 12-15

Daily Centers

#### Week 4: Section D

Lessons 16-17

Section D Checkpoint Interview (During Centers)

End-of-Unit Assessment Interview

Daily Centers

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## SUPPORTING MATERIALS/RESOURCES/STRATEGIES FOR DIFFERENTIATION

### Materials for Centers

	Materials to gather	Materials to copy
Connecting Cubes	Connecting Cubes	Connecting cubes stage 2 cards Connecting cubes stage 3 directions
Geoblocks	Geoblocks solid shapes	Geoblocks stage 2
Pattern Blocks	Pattern blocks	Pattern blocks stage 2 mat Pattern blocks stage 3 directions
Picture Books	Picture books colored pencils/crayons	Picture books stage 2 recording sheet

### Suggested Picture Books:

*Fish Eyes* by, Lois Ehlert

*Ten Little Puppies* by, Elena Vazquez

*Zin! Zin! Zin! A Violin!* by, Lloyd Moss

*My Granny Went to the Market* by, Stella Blackstone and Christopher Corr

*Anno's Counting Book* by, Mitsumasa Anno

*Chicka, Chicka, 1,2,3* by, Bill Martin Jr.; Michael Sampson; Lois Ehlert

*How Dinosaurs Count to 10* by Jane Yolen and Mark Teague

*10 Little Rubber Ducks* by Eric Carle

*Ten Black Dots* by Donald Crews

*Mouse Count* by Ellen Stoll Walsh

*Count!* by Denise Fleming

Special Education	ELLs
<ul style="list-style-type: none"><li>Adhere to all modifications and health concerns stated in each IEP</li><li>Provide students a choice board, allowing students to pick assignments from different levels based on difficulty.</li></ul>	<ul style="list-style-type: none"><li>Use manipulatives to promote conceptual understanding and enhance vocabulary usage</li><li>Provide graphic representations, gestures, drawings, equations, realia,</li></ul>

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<p>Provide supportive strategies:</p> <ul style="list-style-type: none"><li>◦ Educator or para reading aloud text or tech read-aloud</li><li>◦ Develop or provide graphic organizers</li><li>◦ Small group and one-on-one instruction</li><li>◦ Easy to find information on Google Classroom</li><li>◦ Personal copies of anchor charts and notes</li><li>◦ Vocabulary list with visuals</li><li>◦ Extended time on assignments and assessments</li></ul> <ul style="list-style-type: none"><li>• Allow students to demonstrate understanding of a problem using models, captions and, when possible, explaining the reasoning orally and/or in writing.</li><li>• Provide tech support for recording oral or video answers</li><li>• Provide breaks between tasks, use positive reinforcement, use proximity</li><li>• Assure students have experiences that are on the Concrete- Pictorial- Abstract spectrum by using manipulatives</li><li>• Use any suggestions provided by the specific text for a curriculum</li></ul>	<p>and pictures during all segments of instruction</p> <ul style="list-style-type: none"><li>• During i-Ready lessons, click on “Español” to hear specific words in Spanish</li><li>• Utilize graphic organizers which are concrete, pictorial ways of constructing knowledge and organizing information</li><li>• Use sentence frames and questioning strategies so that students will explain their thinking/ process of how to solve word problems</li><li>• Utilize program translations (if available) for L1/ L2 students</li><li>• Reword questions in simpler language</li><li>• Make use of the ELL Mathematical Language Routines (click <a href="#">here</a> for additional information)</li><li>• Scaffolding instruction for ELL Learners</li><li>• Use any suggestions provided by the specific text for a curriculum</li></ul>
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Gifted and Talented	Students At Risk For Failure
<ul style="list-style-type: none"><li>• Elevated contextual complexity (use leveled books via tech resources such as NEWSELA)</li><li>• Inquiry based or open ended assignments</li></ul>	<ul style="list-style-type: none"><li>• Assure students have experiences that are on the Concrete- Pictorial- Abstract spectrum</li><li>• Modify Instructional Strategies, reading</li></ul>

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<p>and projects</p> <ul style="list-style-type: none"><li>• Add in inquiry-based questions and research opportunities to existing projects</li><li>• More time to study concepts with greater depth through independent study or genius hour projects</li><li>• Promote the synthesis of concepts and making real world connections</li><li>• Provide students with enrichment opportunities and experiences suggested by the curriculum</li><li>• Provide opportunities for competitions (math, science, writing, art, etc)</li><li>• Alternative instruction pathways available</li></ul>	<p>aloud text, graphic organizers, one-on-one instruction, class website (Google Classroom), inclusion of more visuals and manipulatives, Field Trips, Google Expeditions, Peer Support, one on one instruction</p> <ul style="list-style-type: none"><li>• Assure constant parental/ guardian contact throughout the year with successes and challenges</li><li>• Design and provide academic contracts to students and guardians with clear goals and deadlines</li><li>• Create an interactive notebook with samples, key vocabulary words, student goals/ objectives.</li><li>• Always plan to address students at risk in your learning tasks, instructions, and directions. Try to anticipate where the needs will be and then address them prior to lessons.</li><li>• Use the programs intended for remediation ancillary to the curriculum (i.e. IXL or iReady for math)</li></ul>
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### **\*Strategies for Students with [504 Plans](#)**

The goal of 504 plans is for students to be educated in regular classrooms along with the services, accommodations, or educational aids they might need. Students can qualify for 504 plans if they have physical or mental impairments that affect or limit any of their abilities to:

- walk, breathe, eat, or sleep
- communicate, see, hear, or speak
- read, concentrate, think, or learn
- stand, bend, lift, or work

General program accommodations/adjustments or services are always made on a case-by-case basis and individualized. Accommodations are to be reasonable and are intended to provide persons with disabilities compensation for their functional limitation(s) due to a mental or physical impairment. Where Section 504 is concerned, accommodations are made to bring a student with a disability to the same starting point as a non-disabled student. Consequently, the accommodations defined in a Section 504 plan are those interventions that are not typically available to all students.



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## Environmental Strategies

- Provide a structured learning environment
- Make separate "space" for different types of tasks
- Possible adapting of non-academic times such as lunch, recess, and physical education
- Change student seating
- Utilize a study carrel
- Alter location or personal or classroom supplies for easier access or to minimize distraction
- Provide sensory breaks
- Provide a written or picture schedule

## Organizational Strategies

- Model and reinforce organizational systems (i.e. color-coding)
- Write out homework assignments, check student's recording of assignments
- Tailor homework assignments toward student strengths
- Set time expectations for assignments
- Provide clues such as clock faces indicating beginning and ending times
- Teach study/organizational skills
- Schedule before or after school tutoring/homework assistance

## Behavioral Strategies

- Use behavioral management techniques consistently within a classroom and across classes
- Implement behavioral/academic contracts
- Utilize positive verbal and/or nonverbal reinforcements
- Utilize logical consequences
- Confer with the student's parents (and student as appropriate)
- Establish a home/school communication system for behavior monitoring
- Post rules and consequences for classroom behavior
- Put student on daily/weekly progress report/contract
- Reinforce self-monitoring and self-recording of behaviors

## Presentation Strategies

- Record lessons so the student can listen to them again; allow students to record lessons
  - Use computer-aided instruction and other audiovisual equipment
  - Select alternative digital/audio textbooks, workbooks, or provide books
  - Highlight main ideas and supporting details in the book
  - Provide copied material for extra practice (i.e. outlines, study guides)
  - Prioritize drill and practice activities for relevance
- 
- Vary the method of lesson presentation using multi-sensory techniques:
    - a) lecture plus overhead/board demonstration support
    - b) small groups required to produce a written product
    - c) large groups required to demonstrate a process
    - d) computer-assisted instruction
    - e) peer tutors or cross-age tutors

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- f) demonstrations, simulations
- g) experiments
- h) games

- Ask student to repeat/paraphrase context to check understanding
- Arrange for a mentor to work with student in his or her interest area or area of greatest strength
- Provide peer tutoring
- Simplify and repeat instructions about in-class and homework assignments
- Vary instructional pace
- Reinforce the use of compensatory strategies, i.e. pencil grip, mnemonic devices, “spell check”
- Vary kind of instructional materials used
- Assess whether the student has the necessary prerequisite skills.
- Reinforce study skill strategies (survey, read, recite, review)
- Introduce definition of new terms/vocabulary and review to check for understanding
- Be aware of student's preferred learning style and provide matching instruction materials
- Pre-teach and/or re-teach important concepts
- Prepare advanced organizers/study guides for new material

## Assignments

- Modify the amount of homework
- Use written directions to supplement oral directions
- Reduce paper and pencil tasks
- Allow for assignments to be word processed
- Lower reading level of assignments
- Break assignments into a series of smaller assignments
- Use highlighted texts

## Evaluation Methods

- Limit amount of material presented on a single page
- Provide a sample or practice test
- Provide for oral testing
- Provide tests in segments so that student hands in one segment before receiving the next part
- Provide personal copy of test tools and allow for color-coding/highlighting
- Adjust time for completion
- Modify weights of tests when grading

[\\*Adapted from Orange Public Schools Curriculum Guide](#)

## Unit 2: Numbers 1-10

Kindergarten Math - Last Updated on June 30, 2021

### STANDARDS ADDRESSED

#### New Jersey (NJSLS) - Kindergarten - Mathematics (2020)

K.CC

K.CC.A.1

K.CC.A.3

K.CC.B.4

K.CC.B.4.b

K.CC.B.5

K.CC.C.6

K.CC.B

K.CC.B.4.c

K.CC.C.7

#### New Jersey (NJSLS) - K-12 - Math Practice Standards (2020)

MA.K-12.2

MA.K-12.4

MA.K-12.7

## Unit 2: Numbers 1-10

Kindergarten Math - Last Updated on June 30, 2021

### DESIRED RESULTS

#### Established Goals

In this unit, students continue to develop counting concepts and skills, including comparing, while learning to write numbers. Students rely on familiar activity structures to build their counting skills and concepts. First, they count and compare the number of objects, and then do the same with groups of images. The images are given in different arrangements-- in lines, arrays, number cube patterns, on 5-frames -- to help students connect different representations to the same numbers. Use of fingers and 5-frames to represent numbers are emphasized and encouraged because they can help students see the structure of numbers 6-10. To compare the number of objects or images, students use terms such as "fewer" "more" and "same."

#### Transfer

Students will be able to independently use their learning to...

answer "how many" questions, count out, and compare groups within 10 and write a number to represent a how many within 10.

#### Meaning

##### Big Ideas & Understandings

- Students will understand that...
- quantities can be represented using numerals and words
  - we count using the count sequence and numbers that come first are smaller than numbers that come later
  - we can compare groups of objects by using the count sequence and using the words "more" "fewer" or "same" to describe the relationship between the groups
  - the number of groups in a object does not change when the same group is configured in a new way

##### Essential Questions

- Students will keep considering...
- Why are numbers necessary?
  - How do we count?
  - How can quantities be represented?
  - How do we compare groups of objects?
  - Does the arrangements of objects change the number of objects?

## Unit 2: Numbers 1-10

Kindergarten Math - Last Updated on June 30, 2021

Acquisition	
Knowledge	Skills
<p>Students will know...</p> <ul style="list-style-type: none"><li>the number remains the same regardless of the arrangement of the objects</li><li>the numbers 1-10 when represented as words (verbally), objects or images and numerals</li><li>the count sequence from 1-10</li><li>that numbers later in the count sequence are larger than numbers earlier in the count sequence</li></ul>	<p>Students will be skilled at...</p> <ul style="list-style-type: none"><li>counting and comparing groups of up to 10 objects</li><li>matching groups of objects or images with spoken words and written numerals for the number</li><li>counting groups of objects 1-10 and writing the numeral associated with that number of objects</li><li>showing numbers with their fingers without counting</li><li>Using the words "more" "fewer" and "same" to compare groups of objects up to 10</li><li>Answer "how many" questions about a group of objects up to 10 that has been rearranged without counting again</li><li>making groups with more than, fewer than, or the same number of objects as a given group</li><li>using the structure of 5 (in 5-frames or on fingers) to count on from 5 to tell how many</li><li>representing numbers with drawings or images to compare numbers</li><li>using the count sequence to compare numbers</li></ul>

## Unit 2: Numbers 1-10

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### ASSESSMENT EVIDENCE (DIAGNOSTIC / FORMATIVE / SUMMATIVE)

## Assessments

Evaluation Criteria	Assessment Evidence
Rubrics/Checklists:  Section A Interview Section B Interview Section C Interview Section D Interview	Performance Task(s):  End of Unit Assessment Math Picture Book
	Other Evidence:  Observation Anecdotal Notes Center Work Practice problems

## Unit 2: Numbers 1-10

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### LEARNING PLAN

#### Summary of Key Learning Events and Instruction:

##### **Week 1: Section A**

Lessons 1-5

Daily Centers

##### **Week 2: Section A and Section B**

Lesson 6

Section A Checkpoint Interview (During Centers)

Lessons 7-10

Daily Centers

##### **Week 3: Section B and Section C**

Lesson 11

Section B Checkpoint Interview (During Centers)

Lessons 12-15

Daily Centers

##### **Week 4: Section C and Section D**

Lesson 16

Section C Checkpoint Interview (During Centers)

Lessons 17-20

Daily Centers

##### **Week 5: Section D**

Lessons 21-22

Section D Checkpoint Interview (During Centers)

End-of-Unit Assessment

Daily Centers

## Unit 2: Numbers 1-10

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### SUPPORTING MATERIALS/RESOURCES/STRATEGIES FOR DIFFERENTIATION

Materials for Centers:

	Materials to Gather	Materials to Copy
Math Fingers		Math Fingers Cards
Pattern Blocks	Pattern Blocks	Pattern Blocks stage 2 mat Pattern Blocks stage 3 directions
Picture Books	Picture Books colored pencils/crayons	Picture books stage 2 recording sheet
Shake and Spill	5-frames cups two-color counters	
Number Race	colored pencils/crayons/markers connecting cubes	Number mat 1-10 Number race stage 1 recording sheet for tracing Number race stage 1 recording sheet for writing
Less Same More	collections of objects connecting cubes	less, same, more mat Image cards grade K Number and Image cards
Math Stories		Math stories stage 1 and 4 pictures math stories stage 1 recording sheet
Connecting Cubes	connecting cubes	connecting cubes stage 2 cards connecting cubes stage 3 directions
Bingo	Counters Number cards 0-10	Bingo Stage 1 cards Bingo stage 1-3 gameboard
Geoblocks	Geoblocks Solid shapes	Geoblocks stage 2
Math Libs	Connecting Cubes	Math Libs scenes Number mat 1-10



# Unit 3: Flat Shapes All Around Us

Kindergarten Math - Last Updated on June 29, 2021

## STANDARDS ADDRESSED

### New Jersey (NJSLS) - Kindergarten - Mathematics (2020)

- K.CC.A.1
- K.CC.A.3
- K.CC.B
- K.CC.B.5
- K.G
- K.G.A.1
- K.G.A.2
- K.G.B.4
- K.G.B.5
- K.MD.A.2
- K.MD.B.3
- K.CC
- K.CC.B.4.c
- K.CC.C
- K.CC.C.6
- K.G.B.6

### New Jersey (NJSLS) - K-12 - Math Practice Standards (2020)

- MA.K-12.4

## Unit 3: Flat Shapes All Around Us

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### DESIRED RESULTS

#### Established Goals

This unit introduces students to the foundational concepts of geometry, with a focus on familiar flat shapes. Students will associate names of shapes with everyday objects. Students will see and interact with many examples of a shape to accurately relate what's in their environment to the geometric term. Students explore differences in shapes and use informal language to describe, compare, and sort them. Circle, triangle, rectangle, and square are four shapes that students study and name here. Students will use pattern blocks to make larger shapes. They reinforce their counting and comparison skills as they count and compare the pattern blocks used to create larger shapes. Students also use positional words (above, below, next to, beside) to describe the shapes they compose.

#### Transfer

Students will be able to independently use their learning to...

identify, describe, analyze, compare, and compose two-dimensional shapes.

#### Meaning

##### Big Ideas & Understandings

Students will understand that...

- objects have a shape with a specific name
- objects can be described by attributes
- objects can be created using various concrete materials

##### Essential Questions

Students will keep considering...

- How can shapes be described?
- How can shapes be created using concrete materials?

#### Acquisition

##### Knowledge

Students will know...

- the names of shapes (triangle, circle, square, and rectangle)
- how to use pattern blocks to create shapes and images

##### Skills

Students will be skilled at...

- Recognize and describe shapes in the environment
- use informal language to describe shapes
- explain what is the same or different about two or

## Unit 3: Flat Shapes All Around Us

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Acquisition	
<ul style="list-style-type: none"><li>• attributes of circles, squares, rectangles, and triangles</li><li>• positional words that can be used to describe the location of shapes</li></ul>	<ul style="list-style-type: none"><li>more shapes</li><li>• sort shapes into groups</li><li>• compare the length of objects</li><li>• identify circles, triangle, rectangles, and squares</li><li>• name circles, triangles, rectangles, and squares</li><li>• describe shapes made from pattern blocks</li><li>• identify the pattern blocks needed to fill a puzzle</li><li>• recognize that shapes are the same regardless of orientation</li><li>• use positional words to describe the location of shapes</li><li>• count the number of pattern blocks used to make a shape</li><li>• compare the number of pattern blocks used to make a shape</li><li>• create triangles, circles, rectangles, and squares</li></ul>

### ASSESSMENT EVIDENCE (DIAGNOSTIC / FORMATIVE / SUMMATIVE)

## Assessments

Evaluation Criteria	Assessment Evidence
Rubrics/Checklists:  Section A Interview Section B Interview	Performance Task(s):  Create a shape storybook End of Unit Assessment
	Other Evidence:  Observation Anecdotal Notes Center Work Practice problems

## Unit 3: Flat Shapes All Around Us

Kindergarten Math - Last Updated on June 29, 2021

### LEARNING PLAN

#### Summary of Key Learning Events and Instruction:

##### **Week 1: Section A**

Lessons 1-5

Daily Centers

##### **Week 2: Section A and Section B**

Lessons 6-9

Section A Checkpoint Interview (During Centers)

Lesson 10

Daily Centers

##### **Week 3: Section B**

Lessons 11-15

Section B Checkpoint Interview (During Centers)

End-of-Unit Assessment

Daily Centers

## Unit 3: Flat Shapes All Around Us

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### SUPPORTING MATERIALS/RESOURCES/STRATEGIES FOR DIFFERENTIATION

Materials for Centers:

	Materials to Gather	Materials to Copy
Picture Books	Picture books Colored pencils/crayons	Picture Book Stage 2 Recording Sheet Picture Book Stage 3 Recording Sheet
Shake and Spill	5-frames Cups Two-color counters	
Bingo	Counters Number cards 0-10	Bingo Stage 1 cards Bingo Stage 1-3 gameboard
Which One?	Counters	Which one stage 1 gameboard
Counting Collections	10-frames 5-frames collections of objects	Counting collections stages 1 and 2 recording sheet
Build Shapes	Play dough/Modeling clay straws	build shapes stage 1 and 2 cards
Pattern blocks	Pattern blocks	Pattern blocks stage 2 mat Pattern blocks stage 3 directions Pattern blocks stage 4 recording sheets Pattern blocks stage 5 mat Pattern blocks stage 5 recording sheet
Geoblocks	geoblocks solid shapes	geoblocks stage 2
Less Same More	collections of objects connecting cubes	Less, Same, More mat Image cards grade K Number and Image cards
Match mine	Folders Pattern blocks	

Picture books:

## Unit 3: Flat Shapes All Around Us

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*Fish Eyes* by Lois Ehlert

*Ten Little Puppies* by Elena Vazquez

*Zin! Zin! Zin! A Violin!* by Lloyd Moss

*My Granny Went to the Market* by Stella Blackstone, and Christopher Corr

*Anno's Counting Book* by Mitsumasa Anno

*Chicka, Chicka, 1, 2, 3* by Bill Martin Jr.; Michael Sampson; Lois Ehlert

*How Dinosaurs Count to 10* by Jane Yolen and Mark Teague

*10 Little Rubber Ducks* by Eric Carle

*Ten Black Dots* by Donald Crews

*Mouse Count* by Ellen Stoll Walsh

*Count!* by Denise Flemming

# Unit 4: Understanding Addition and Subtraction

Kindergarten Math - Last Updated on June 29, 2021

## STANDARDS ADDRESSED

### New Jersey (NJSLS) - Kindergarten - Mathematics (2020)

- K.CC
- K.CC.A.1
- K.CC.B.5
- K.OA.A.1
- K.OA.A.2
- K.CC.A.3
- K.CC.A.2
- K.CC.B.4.c

### New Jersey (NJSLS) - K-12 - Math Practice Standards (2020)

- MA.K-12.1
- MA.K-12.4

## Unit 4: Understanding Addition and Subtraction

Kindergarten Math - Last Updated on June 29, 2021

### DESIRED RESULTS

#### Established Goals

In this unit, students develop their understanding of addition and subtraction as they represent and solve story problems. They relate counting to the result of two actions: putting objects together or taking objects away. Students enact addition by counting the total number of objects in two groups and subtraction by counting what remains after some objects are taken away. Students then make sense of stories without questions and later solve story problems of two types- Add To, Result Unknown and Take From, Result Unknown. Students represent the problems in different ways, by acting them out, drawing, using numbers or using objects. Students have access to connecting cubes in all lessons if they choose to use them. Students are introduced to expressions for addition and subtraction. Later in the unit, students connect expressions to pictures and story problems. They find the value of addition and subtraction expression within 10.

#### Transfer

Students will be able to independently use their learning to...

relate counting to addition and solve addition and subtraction story problems within 10

#### Meaning

##### Big Ideas & Understandings

Students will understand that...

- Addition is putting groups together and making more
- Subtraction is taking groups apart, taking away from a group and making less
- they can represent addition and subtraction by acting it out, using objects, drawing images, and using expressions

##### Essential Questions

Students will keep considering...

- **What happens when we combine groups?**
- **What happens when we take some away from a group?**
- **How do we add?**
- **How do we subtract?**
- **How can we represent addition and subtraction?**

#### Acquisition

##### Knowledge

Students will know...

##### Skills

Students will be skilled at...



## Unit 4: Understanding Addition and Subtraction

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### Acquisition

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>• how to determine the action in a story problem</li><li>• strategies for tracking which objects or images have been counted</li><li>• the symbols and words (+, -, plus, minus, add, take away, etc.) used to describe addition and subtraction problems</li></ul> | <ul style="list-style-type: none"><li>• counting to find the total or difference</li><li>• adding or taking away objects to represent addition and subtraction</li><li>• retelling a story problem in their own words</li><li>• acting out or demonstrating with objects or drawings the actions of a story problem</li><li>• using objects or drawings to represent a story problem</li><li>• explaining how objects or drawings represent a story problem</li><li>• explaining how an expression connects to a drawing or story problem</li><li>• filling in an expression to represent a drawing</li><li>• using fingers, objects, or drawings to find the value of an expression</li><li>• counting all to determine the total when 0 or 1 are added</li><li>• using knowledge of the count sequence to determine the total when 1 is added</li></ul> |
|---|---|

## Unit 4: Understanding Addition and Subtraction

Kindergarten Math - Last Updated on June 29, 2021

### ASSESSMENT EVIDENCE (DIAGNOSTIC / FORMATIVE / SUMMATIVE)

## Assessments

Evaluation Criteria	Assessment Evidence
Rubrics/Checklists:  Section A Checkpoint Interview Section B Checkpoint Interview Section C Checkpoint Interview	Performance Task(s):  Create your own Math Stories End-of-Unit Assessment
	Other Evidence:  Observation Anecdotal Notes Center Work Section Practice Problems

## Unit 4: Understanding Addition and Subtraction

Kindergarten Math - Last Updated on June 29, 2021

### LEARNING PLAN

#### Summary of Key Learning Events and Instruction:

##### **Week 1: Section A**

Lessons 1-5

Section A Checkpoint Interview (During Centers)

Daily Centers

##### **Week 2: Section B**

Lessons 6-10

Daily Centers

##### **Week 3: Section B and Section C**

Lessons 11-13

Section B Checkpoint Interview (During Centers)

Lessons 14-15

Daily Centers

##### **Week 4: Section C**

Lessons 16-18

Section C Checkpoint Interview (During Centers)

End-of-Unit Assessment

Daily Centers

## Unit 4: Understanding Addition and Subtraction

Kindergarten Math - Last Updated on June 29, 2021

### SUPPORTING MATERIALS/RESOURCES/STRATEGIES FOR DIFFERENTIATION

Materials for Centers:

	Materials to Gather	Materials to Copy
Math Libs	Connecting Cubes	Math Libs Scenes Number Mat 1-10
Pattern Blocks	Folders Pattern Blocks	
Roll and Add	Connecting Cubes Two-color counters	Roll and Add Stage 1 Dot Images Roll and Add stage 1 recording sheet Number Mat 1-5 Rolls and Add stage 2 recording sheet
5-frames	connecting cubes counters	5-frame 5-frames stages 1 and 2 recording sheet Number Mat 1-5
Subtraction Towers	Connecting cubes	Number Mat 1-5
Build Shapes	Play dough/modeling clay straws	Build shapes stage 1 and 2 cards
Counting collections	10-frames 5-frames collections of objects	Counting collections stages 1 and 2 recording sheet
Math Stories		Math stories stages 1 and 4 pictures Math stories stage 1 recording sheet Math stories stage 2 backgrounds Math stories stage 2 recording sheet
Math Fingers		Math fingers cards Math fingers stage 3 recording sheet
Bingo	two-color counters Numbers cards 0-10 connecting cubes	Bingo stage 1 cards Bingo stages 1-3 gameboard Dot mat 1-5
Number Race	colored pencils/crayons/markers connecting cubes	Number Mat 1-10 Number race stage 1 recording sheet for tracing

## Unit 4: Understanding Addition and Subtraction

Kindergarten Math - Last Updated on June 29, 2021

		Number race stage 1 recording sheet for writing
Shake and Spill	5-frames cups two-color counters	Shake and spill stage 3 recording sheet grade 1 Shake and spill stage 3 recording sheet kindergarten
Find the Value of Expressions	connecting cubes/two-color counters	Find the value of expressions within 10 stage 1 cards Find the value of expressions within 10 stage 1 recording sheet

# Unit 5: Composing and Decomposing Numbers to 10

Kindergarten Math - Last Updated on June 29, 2021

## STANDARDS ADDRESSED

### New Jersey (NJSLS) - Kindergarten - Mathematics (2020)

- K.CC.A.1
- K.CC.A.2
- K.OA.A.2
- K.OA.A.3
- K.OA.A.5
- K.OA.A.1
- K.CC
- K.CC.A.3
- K.CC.B
- K.CC.B.5
- K.OA.A.4

### New Jersey (NJSLS) - K-12 - Math Practice Standards (2020)

- MA.K-12.1
- MA.K-12.2
- MA.K-12.4
- MA.K-12.7

## Unit 5: Composing and Decomposing Numbers to 10

Kindergarten Math - Last Updated on June 29, 2021

### DESIRED RESULTS

#### Established Goals

In this unit, students explore different ways to compose and decompose numbers within 10 and to represent the compositions and decompositions. Students use their experiences from adding and subtracting within 10 to compose ("make") and decompose ("break apart") numbers within 10. Special attention is given to composing and decomposing 10, as it is the basis of place value in our number system. Students use their fingers and a 10-frame to think about pairs of numbers that make 10. Symbolic notation develops slowly across the units. Students first complete expressions that represent numbers being composed and decomposed. Later, students encounter equations written with the total on the left side ( $5=3+2$ ), this notation helps students see that the equal sign means that both sides have the same value.

#### Transfer

Students will be able to independently use their learning to...

compose and decompose numbers within 10

#### Meaning

##### Big Ideas & Understandings

Students will understand that...

- composing is making a number and decomposing is breaking apart
- compositions and decompositions can be represented using a 10-frame, connecting cubes, fingers, drawings, and equations

##### Essential Questions

Students will keep considering...

- How do we compose and decompose numbers within 10?
- How can we represent compositions and decompositions within 10?

#### Acquisition

##### Knowledge

Students will know...

- numbers can be composed and decomposed in

##### Skills

Students will be skilled at...

- compose and decompose numbers in different

## Unit 5: Composing and Decomposing Numbers to 10

Kindergarten Math - Last Updated on June 29, 2021

### Acquisition

more than one way

- strategies to compose and decompose numbers and ways to represent those compositions and decompositions
- that expressions can be used to represent compositions and decompositions of numbers

ways

- represent compositions and decompositions with a drawing
- represent compositions and decompositions with an expression
- retell a story problem in their own words
- use objects or drawings to represent a story problem
- explain how objects or drawings represent a story problem
- use labels, colors, numbers or other methods to represent the two groups in a story problem
- recognize that a full 10-frame contains 10 counters and that their 2 hands have 10 fingers
- explain the relations between equations and compositions and decompositions of 10
- use the structure of 10-frames or fingers to to determine how many more are needed to make 10 when given a number
- use connecting cubes to determine how many more are needed to make 10 when given a number
- state how many more are needed to make 10 when given a number without using math tools or fingers



## Unit 5: Composing and Decomposing Numbers to 10

Kindergarten Math - Last Updated on June 29, 2021

### ASSESSMENT EVIDENCE (DIAGNOSTIC / FORMATIVE / SUMMATIVE)

## Assessments

Evaluation Criteria	Assessment Evidence
Rubrics/Checklists:  Section A Checkpoint Interview Section B Checkpoint Interview Section C Checkpoint Interview	Performance Task(s):  Create a Math Story End-of-Unit Assessment
	Other Evidence:  Observations Anecdotal Notes Center Work Section Practice Problems

### LEARNING PLAN

#### Summary of Key Learning Events and Instruction:

##### Week 1: Section A and Section B

Lessons 1-4

Section A Checkpoint Interview (During Centers)

Lesson 5

Daily Centers

##### Week 2: Section B and Section C

Lessons 6-9

Section B Checkpoint Interview (During Centers)

Lesson 10

Daily Centers

##### Week 3: Section C

Lessons 11-15

Section C Checkpoint Interview (During Centers)

End-of-Unit Assessment

Daily Centers

## Unit 5: Composing and Decomposing Numbers to 10

Kindergarten Math - Last Updated on June 29, 2021

### SUPPORTING MATERIALS/RESOURCES/STRATEGIES FOR DIFFERENTIATION

Materials for Centers:

	Materials to Gather	Materials to Copy
Check it Off	Number cards 0-10	Check it off stage 1 recording sheet grade 1 Check it off stage 1 recording sheet grade K
Find the Value of the Expressions	Connecting cubes/two-color counters	Find the value of the expressions within 10 stage 1 cards Find the value of the expressions within 10 stage 1 recording sheet
Shake and Spill	5-frames Cups Two-color counters crayons	Shake and spill stage 3 recording sheet grade 1 Shake and spill stage 3 recording sheet kindergarten
Bingo	Two-color counters Number cards 0-10 Connecting cubes	Bingo stage 1 cards Bingo stages 1-3 gameboard Dot mat 1-5
What's Behind my Back	Connecting cubes Crayons 10-frame	What's behind my back stage 1 recording sheet What's behind my back stage 2 recording sheet grade 1 What's behind my back stage 2 recording sheet Kindergarten
Make or Break Apart Numbers	Connecting cubes Two-color counters	Make or break apart numbers stage 1 dot page Make or break apart numbers stage 1 number mat 4-9 Make or break apart numbers stage 1 recording sheet
5-frames	Connecting cubes Counters	5-frame 5-frames stages 1 and 2 recording sheet Number mat 1-5
Math Stories	Connecting cubes/two-color counters	Math stories stage 1 and 4 pictures Math stories stage 1 recording sheet

## Unit 5: Composing and Decomposing Numbers to 10

Kindergarten Math - Last Updated on June 29, 2021

		Math stories stage 2 backgrounds Math stories stage 2 recording sheet Math stories stage 3 pictures Math stories stage 3 recording sheet
Counting Collections	10-frames 5-frames collections of objects	Counting collections stage 1 and 2 recording sheet
Roll and Add	Connecting cubes/two-color counters	Roll and add stage 1 dot images mat Roll and add stage 1 recording sheet Number mat 1-5 Roll and add stage 2 recording sheet
Math Fingers		Math fingers cards Math fingers stage 3 recording sheet

# Unit 6: Numbers 0-20

Kindergarten Math - Last Updated on June 29, 2021

STANDARDS ADDRESSED							
New Jersey (NJSLS) - Kindergarten - Mathematics (2020)							
K.CC.A.1	K.CC.A.2	K.CC.A.3	K.CC.B	K.CC.B.4	K.CC.B.4.a	K.CC.B.4.b	K.CC.B.5
K.OA.A.1	K.OA.A.2	K.OA.A.5	K.CC	K.NBT.A.1			
New Jersey (NJSLS) - K-12 - Math Practice Standards (2020)							
MA.K-12.4	MA.K-12.7						

## Unit 6: Numbers 0-20

Kindergarten Math - Last Updated on June 29, 2021

### DESIRED RESULTS

#### Established Goals

In this unit, students count and represent collections of objects and images within 20. They apply previously developed counting concepts- such as one-to-one correspondence, keeping track of what has been counted, and conservation of numbers- to larger numbers. Students use the 10-frame to organize groups of 11-19 objects and images. This tool encourages students to see teen numbers as 10 ones and some more ones, emphasizing the 10+n structure of the numbers 11-19. They use this structure as they represent teen numbers with their fingers, objects, drawings, expressions, and equations. Students practicing tracing and writing numbers 11-20.

#### Transfer

Students will be able to independently use their learning to...

answer "how many" questions and count out groups within 20 and represent numbers within 20 using objects, drawings, and numerals.

#### Meaning

Big Ideas & Understandings	Essential Questions
<p>Students will understand that...</p> <ul style="list-style-type: none"><li>• numbers 11-19 are composed of ten ones and up to nine more ones</li><li>• they can use 10-frames and some more to show numbers 11-19</li><li>• we use the count sequence for 11-20 to count groups larger than 10</li><li>• the number of objects does not change based on arrangement</li></ul>	<p>Students will keep considering...</p> <ul style="list-style-type: none"><li>• How do we break numbers apart into tens and ones?</li><li>• How can quantities greater than 10 be represented?</li><li>• How do we count groups larger than 10?</li><li>• Does the arrangement of objects change the number of objects?</li></ul>

#### Acquisition

Knowledge	Skills
Students will know...	Students will be skilled at...

## Unit 6: Numbers 0-20

Kindergarten Math - Last Updated on June 29, 2021

Acquisition	
<ul style="list-style-type: none"><li>• how to keep track of objects and images that have been counted</li><li>• that after a group of objects that has been counted is rearranged, the total number of objects remains the same without recounting</li><li>• that a full 10-frame or all the fingers on two hands represents 10 without counting</li></ul>	<ul style="list-style-type: none"><li>• saying the count sequence to 20</li><li>• answering how many questions without counting again</li><li>• counting to find the total of a group up to 20</li><li>• counting on from 10 to find the total</li><li>• counting or recognizing the ones outside of the 10 ones and using a 10+n fact to find the total</li><li>• writing numbers 11-19</li><li>• Identifying a group of 10 images in a group of 11-19 images</li></ul>

### ASSESSMENT EVIDENCE (DIAGNOSTIC / FORMATIVE / SUMMATIVE)

## Assessments

Evaluation Criteria	Assessment Evidence
Rubrics/Checklists:  Section A Checkpoint Interview Section B Checkpoint Interview Section C Checkpoint Interview	Performance Task(s):  End-of-Unit Assessment
	Other Evidence:  Observations Anecdotal Notes Center Work Section Practice Problems

## Unit 6: Numbers 0-20

Kindergarten Math - Last Updated on June 29, 2021

### LEARNING PLAN

#### Summary of Key Learning Events and Instruction:

##### **Week 1: Section A and Section B**

Lessons 1-4

Section A Checkpoint Interview (During Centers)

Lesson 5

Daily Centers

##### **Week 2: Section B**

Lessons 5-10

Section B Checkpoint Interview

Daily Centers

##### **Week 3: Section C**

Lessons 11-13

Section C Checkpoint Interview

End-of-Unit Assessment

Daily Centers

## Unit 6: Numbers 0-20

Kindergarten Math - Last Updated on June 29, 2021

### SUPPORTING MATERIALS/RESOURCES/STRATEGIES FOR DIFFERENTIATION

#### Materials for Centers

	Materials to Gather	Materials to Copy
Number Race	Colored pencils/crayons/markers Connecting cubes	Number mat 1-10 Number race stage 1 recording sheet for tracing Number race stage 1 recording sheet for writing Number mat 11-20 Number race stage 2 recording sheet for tracing Number race stage 2 recording sheet for writing
Subtraction Towers	Connecting cubes	Number mat 1-5
5-frames	Connecting cubes Counters	5-frame 5-frames stage 1 and 2 recording sheet Number mat 1-5
Find the Pair	5-frames Counters/connecting cubes Number cards 0-10 10-frames	Find the pair stage 1 recording sheet Find the pair stage 2 recording sheet
Tower Build	Connecting cubes	Number mat 1-5 Number mat 1-10
Grab and Count	Pattern blocks	Grab and count stage 1 recording sheet
Bingo	Two-color counters Number cards 0-10 Connecting cubes	Bingo stage 1 cards Bingo stages 1-3 gameboard Dot mat 1-5 Bingo stage 4 Gameboard
Make or Break Apart Numbers	Connecting cubes Two-color counters	Make or break apart numbers stage 1 dot page Make or break apart numbers stage 1 number mat 4-9 Make or break apart numbers stage 1 recording sheet Make or break apart numbers stage 2 gameboards



## Unit 6: Numbers 0-20

Kindergarten Math - Last Updated on June 29, 2021

		Make or break apart numbers stage 2 number mat 11-19 Make or break apart numbers stage 2 recording sheet
Find the Value of the Expression	Connecting cubes/Two-color counters	Find the value of expressions within 10 stage 1 cards Find the value of expressions within 10 stage 1 recording sheet

# Unit 7: Solid Shapes All Around Us

Kindergarten Math - Last Updated on June 30, 2021

## STANDARDS ADDRESSED

### New Jersey (NJSLS) - Kindergarten - Mathematics (2020)

- K.CC
- K.CC.A.1
- K.CC.A.3
- K.CC.B.5
- K.CC.C
- K.CC.C.6
- K.CC.C.7
- K.G.B.5
- K.G.B.6
- K.NBT.A.1
- K.OA
- K.OA.A.1
- K.OA.A.2
- K.OA.A.3
- K.OA.A.4
- K.OA.A.5
- K.G
- K.G.A.1
- K.G.A.2
- K.G.A.3
- K.G.B.4
- K.MD.A
- K.MD.A.1
- K.MD.A.2
- K.MD.B.3

### New Jersey (NJSLS) - K-12 - Math Practice Standards (2020)

- MA.K-12.4

## Unit 7: Solid Shapes All Around Us

Kindergarten Math - Last Updated on June 30, 2021

### DESIRED RESULTS

#### Established Goals

In this unit, students explore solid shapes while reinforcing their knowledge of counting, number writing and comparison, and flat shapes. They compose figures with pattern blocks and continue to count up to 20 objects, write and compare numbers, and solve story problems. Students distinguish between flat and solid shapes before focusing on solid shapes. They consider the weight and capacity of solid objects and identify solid shapes around them. Geoblocks, connecting cubes, and everyday objects are used throughout the unit. Students use their own language to describe attributes of solid shapes as they identify, sort, compare, and build them, while also learning the names for cones, cubes, spheres, and cylinders.

#### Transfer

Students will be able to independently use their learning to...

- identify, describe, analyze, compare, and compose two- and three-dimensional shapes.
- count, add and subtract

#### Meaning

Big Ideas & Understandings	Essential Questions
Students will understand that... <ul style="list-style-type: none"><li>• three-dimensional shapes have weight and capacity</li><li>• objects have a shape with specific names</li><li>• objects can be created using various concrete materials</li></ul>	Students will keep considering... <ul style="list-style-type: none"><li>• How can three-dimensional shapes be described?</li><li>• What are the differences between two- and three-dimensional shapes?</li><li>• How can three-dimensional shapes be created using concrete materials?</li></ul>

#### Acquisition

Knowledge	Skills
Students will know... <ul style="list-style-type: none"><li>• the difference between flat shapes and solid</li></ul>	Students will be skilled at... <ul style="list-style-type: none"><li>• Counting all to determine a total</li></ul>

## Unit 7: Solid Shapes All Around Us

Kindergarten Math - Last Updated on June 30, 2021

### Acquisition

<p>shapes</p> <ul style="list-style-type: none"><li>the three-dimensional shapes- cone, sphere, cylinder and cube- and their attributes</li><li>positional words used to describe the location of objects in relation to other objects</li><li>how to determine the weight and capacity of three-dimensional shapes</li><li>how to apply previous concepts of counting, writing and comparing numbers to the concrete materials they are using</li></ul>	<ul style="list-style-type: none"><li>writing a number to express a quantity up to 20</li><li>retelling a story problem in their own words</li><li>using objects, drawing, or equations to represent a story problem</li><li>explaining connections between objects, drawing, story problems, and equations</li><li>using their own language to describe and compare attributes of solid shapes</li><li>building solid shapes from components</li><li>putting solid shapes together to compose new shapes</li><li>using positional words to describe the locations of solid shapes</li></ul>
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### ASSESSMENT EVIDENCE (DIAGNOSTIC / FORMATIVE / SUMMATIVE)

## Assessments

Evaluation Criteria	Assessment Evidence
<p>Rubrics/Checklists:</p> <p>Topic A Checkpoint Interview</p> <p>Topic B Checkpoint Interview</p>	<p>Performance Task(s):</p> <p>End-of-Unit Assessment</p>
	<p>Other Evidence:</p> <p>Observation</p> <p>Anecdotal Notes</p> <p>Center Work</p> <p>Section Practice Problems</p>

# Unit 7: Solid Shapes All Around Us

Kindergarten Math - Last Updated on June 30, 2021

## LEARNING PLAN

### Summary of Key Learning Events and Instruction:

#### **Week 1: Section A**

Lessons 1-5

Daily Centers

#### **Week 2: Section A and Section B**

Lesson 6

Section A Checkpoint (During Centers)

Lessons 7-10

Daily Centers

#### **Week 3: Section B**

Lessons 11-15

Daily Centers

#### **Week 4: Section B**

Lesson 16

Section B Checkpoint (During Centers)

End-of-Unit Assessment

Daily Centers

## Unit 7: Solid Shapes All Around Us

Kindergarten Math - Last Updated on June 30, 2021

### SUPPORTING MATERIALS/RESOURCES/STRATEGIES FOR DIFFERENTIATION

Materials for Centers:

	Materials to Gather	Materials to Copy
Geoblocks	Geoblocks Solid shapes Bags	Geoblocks stage 2
Find the Pair	5-frames Counters Number cards 0-10 10-frames connecting cubes	Find the pair stage 1 recording sheet Find the pair stage 2 recording sheet
Grab and Count	Pattern blocks	Grab and count stage 1 recording sheet
Pattern Blocks	Pattern blocks	Pattern blocks stage 2 mat Pattern blocks stage 3 directions Pattern blocks stage 4 recording sheet Pattern blocks stage 5 mat Pattern blocks stage 5 recording sheet Pattern blocks stage 6 mat Pattern blocks stage 7 recording sheet
Shake and Spill	5-frames Cups Two-color counters Crayons	Shake and spill stage 3 recording sheet grade 1 Shake and spill stage 3 recording sheet kindergarten Shake and spill stage 4 and 5 recording sheet (G1 and 2) Shake and spill stage 4 and 5 recording sheet kindergarten
Match Mine	Folders Pattern blocks Geoblocks Solid shapes	
Counting Collections	10-frames 5-frames Collections of objects	Counting collections stages 1 and 2 recording sheet

## Unit 7: Solid Shapes All Around Us

Kindergarten Math - Last Updated on June 30, 2021

Build Shapes	Play dough/modeling clay Straws Geoblocks Solid shapes Sticks	Building shapes stage 1 and 2 cards

# Unit 8: Putting It All Together

Kindergarten Math - Last Updated on July 21, 2021

STANDARDS ADDRESSED

New Jersey (NJSLS) - Kindergarten - Mathematics (2020)

- K.CC
- K.CC.A.1
- K.CC.A.2
- K.CC.A.3
- K.CC.B.4
- K.CC.B.4.c
- K.CC.B.5
- K.CC.C
- K.MD.B.3
- K.NBT.A.1
- K.OA.A.2
- K.CC.A
- K.CC.B
- K.MD
- K.OA
- K.OA.A.1
- K.OA.A.5
- K.CC.C.6
- K.OA.A.3
- K.NBT.A
- K.OA.A.4

New Jersey (NJSLS) - K-12 - Math Practice Standards (2020)

- MA.K-12.4
- MA.K-12.7
- MA.K-12.1



## Unit 8: Putting It All Together

Kindergarten Math - Last Updated on July 21, 2021

### DESIRED RESULTS

#### Established Goals

In this unit, students revisit major work and fluency goals of the grade, applying their learning from the year. Section A focuses on concepts of counting and comparing. Section B highlights the presence of math in students' school community. Section C enables students to practice composing and decomposing numbers within 5, as well as adding and subtracting within 5. Section D focuses on composing and decomposing 10. The goal is to offer ample opportunities for students to integrate the knowledge they have gained and to practice skills related to the expected fluencies of the grade.

#### Transfer

Students will be able to independently use their learning to...

- count and compare groups of objects and images
- represent and write numbers up to 20
- fluently add and subtract within 5
- use understanding of 10 to work with numbers to 20

#### Meaning

##### Big Ideas & Understandings

Students will understand that...

- quantities can be represented using numerals and words
- we can compare groups of objects by using the words "more" "less" and "same" to describe the relationship between groups
- we count using the count sequence and numbers that come first in the sequence are smaller than numbers that come later
- addition is putting groups together and making more
- subtraction is taking groups apart, taking away from a group and making less

##### Essential Questions

Students will keep considering...

- How can quantities be represented?
- How do we compare groups of objects?
- How do we count?
- What happens when we combine groups?
- What happens when we take some away?
- How do we add?
- How do we subtract?
- How can we represent addition and subtraction?
- How do we compose and decompose numbers within 10?
- How can we represent compositions and decompositions within 10?

## Unit 8: Putting It All Together

Kindergarten Math - Last Updated on July 21, 2021

Meaning	
<ul style="list-style-type: none"><li>• addition and subtraction can be represented by acting it out, using objects, drawing images, and using expressions</li><li>• composing is making a number and decomposing is breaking apart</li><li>• compositions and decompositions can be represented using a 10-frame, connecting cubes, fingers, drawings and equations</li></ul>	

Acquisition	
Knowledge	Skills
<p>Students will know...</p> <ul style="list-style-type: none"><li>• the count sequence up to 20</li><li>• addition strategies</li><li>• subtraction strategies</li><li>• numbers 11-19 are 10 ones and some more ones</li><li>• that composing is making numbers and decomposing is breaking numbers and that numbers can be composed and decomposed in different ways</li></ul>	<p>Students will be skilled at...</p> <ul style="list-style-type: none"><li>• counting and comparing groups of objects and images</li><li>• counting, reading, and writing numbers up to 20</li><li>• using numbers and their knowledge of the count sequence to compare groups of images</li><li>• using their knowledge of the count sequence to find how many after one is added or taken away from a given numbers</li><li>• using objects, drawings, numbers, words, and expressions or equations to represent quantities up to 20</li><li>• Fluently adding and subtracting within 5</li><li>• counting all to find the sum</li><li>• using the count sequence to find sums and differences</li><li>• representing all, then crossing off or removing to find the difference</li><li>• finding how many more are needed to make 10 when given a number</li></ul>

## Unit 8: Putting It All Together

Kindergarten Math - Last Updated on July 21, 2021

Acquisition	
	<ul style="list-style-type: none"><li>• using 10 as a benchmark estimate and count</li><li>• composing and decomposing numbers in different ways</li><li>• relating equations to compositions and decompositions of numbers</li></ul>

### ASSESSMENT EVIDENCE (DIAGNOSTIC / FORMATIVE / SUMMATIVE)

## Assessments

Evaluation Criteria	Assessment Evidence
Rubrics/Checklists:  Section A Checkpoint Interview Section B Checkpoint Interview Section C Checkpoint Interview	Performance Task(s):  End-of-Unit Assessment Create a Number Book
	Other Evidence:  Observations Anecdotal notes Center Work

## Unit 8: Putting It All Together

Kindergarten Math - Last Updated on July 21, 2021

### LEARNING PLAN

#### Summary of Key Learning Events and Instruction:

##### **Week 1: Section A**

Lessons 1-5

Section A Checkpoint (During Centers)

Daily Centers

##### **Week 2: Section B**

Lessons 6-10

Daily Centers

##### **Week 3: Section B and Section C**

Lesson 11

Section B Checkpoint (During Centers)

Lessons 12-15

Daily Centers

##### **Week 4: Section C and Section D**

Lesson 16

Section C Checkpoint (During Centers)

Lessons 17-20

Daily Centers

##### **Week 5: Section D**

Lesson 21

Section D Checkpoint (During Centers)

End-of-Unit Assessment

Daily Centers

## Unit 8: Putting It All Together

Kindergarten Math - Last Updated on July 21, 2021

### SUPPORTING MATERIALS/RESOURCES/STRATEGIES FOR DIFFERENTIATION

Materials for Centers:

	Materials to Gather	Materials to Copy
Less, Same, More	Collections of objects Connecting cubes	less, same, more mat Image cards grade K Number and Image cards
Math Fingers		Math fingers cards Math fingers stage 3 recording sheet
Tower Build	Connecting cubes	Number mat 1-5 Number mat 1-10
Math Stories	Connecting cubes/two-color counters	Math stories stage 1 and 4 pictures Math stories stage 1 recording sheet Math stories stage 2 backgrounds Math stories stage 2 recording sheet Math stories stage 3 pictures Math stories stage 3 recording sheet
Which One?	Counters	Which one stage 1 gameboard
Picture Books	Picture books Colored pencils/crayons	Picture Book Stage 2 Recording Sheet Picture Book Stage 3 Recording Sheet
Find the Pair	5-frames Counters Number cards 0-10 10-frames connecting cubes	Find the pair stage 1 recording sheet Find the pair stage 2 recording sheet
Build Shapes	Play dough/modeling clay Straws Geoblocks Solid shapes Sticks	Building shapes stage 1 and 2 cards
Make or Break Apart Numbers	Connecting cubes Two-color counters	Make or break apart numbers stage 1 dot page Make or break apart numbers stage 1 number mat 4-9 Make or break apart numbers stage 1 recording sheet

## Unit 8: Putting It All Together

Kindergarten Math - Last Updated on July 21, 2021

		<p>Make or break apart numbers stage 2 gameboards</p> <p>Make or break apart numbers stage 2 number mat 11-19</p> <p>Make or break apart numbers stage 2 recording sheet</p>
5-Frames	<p>Connecting cubes</p> <p>Counters</p>	<p>5-frame</p> <p>5-frames stage 1 and 2 recording sheet</p> <p>Number mat 1-5</p>
Roll and Add	<p>Connecting cubes/two-color counters</p>	<p>Roll and add stage 1 dot images mat</p> <p>Roll and add stage 1 recording sheet</p> <p>Number mat 1-5</p> <p>Roll and add stage 2 recording sheet</p>
Bingo	<p>Two-color counters</p> <p>Number cards 0-10</p> <p>Connecting cubes</p>	<p>Bingo stage 1 cards</p> <p>Bingo stages 1-3 gameboard</p> <p>Dot mat 1-5</p> <p>Bingo stage 4 Gameboard</p>
Geoblocks	<p>Geoblocks</p> <p>Solid shapes</p> <p>Bags</p>	<p>Geoblocks Stage 2</p>
Find the Value of Expressions	<p>Connecting cubes/Two-color counters</p>	<p>Find the value of expressions within 10 stage 1 cards</p> <p>Find the value of expressions within 10 stage 1 recording sheet</p>
Shake and Spill	<p>5-frames</p> <p>Cups</p> <p>Two-color counters</p> <p>Crayons</p>	<p>Shake and spill stage 3 recording sheet grade 1</p> <p>Shake and spill stage 3 recording sheet kindergarten</p> <p>Shake and spill stage 4 and 5 recording sheet (G1 and 2)</p> <p>Shake and spill stage 4 and 5 recording sheet kindergarten</p>
Number Race	<p>Colored pencils/crayons/markers</p> <p>Connecting cubes</p>	<p>Number mat 1-10</p> <p>Number race stage 1 recording sheet for tracing</p> <p>Number race stage 1 recording</p>

## Unit 8: Putting It All Together

Kindergarten Math - Last Updated on July 21, 2021

		sheet for writing Number mat 11-20 Number race stage 2 recording sheet for tracing Number race stage 2 recording sheet for writing
Grab and Count	Pattern blocks	Grab and count stage 1 recording sheet
What's Behind My Back?	Connecting cubes Crayons 10-frame	What's behind my back stage 1 recording sheet What's behind my back stage 2 recording sheet grade 1 What's behind my back stage 2 recording sheet Kindergarten
Pattern Blocks	Pattern Blocks	Pattern blocks stage 2 mat Pattern blocks stage 3 directions Pattern blocks stage 4 recording sheet Pattern blocks stage 5 mat Pattern blocks stage 5 recording sheet Pattern blocks stage 6 mat Pattern blocks stage 7 recording sheet