Green Township School District Kindergarten Mathematics Curriculum - Revised 2017

Year Overview by Unit			
Unit 1: Numbers to 10			***Approximate length: 9 weeks***
	NJ Student Learning Standards: ● K.CC.A.3* ● K.CC.B.4* ● K.CC.B.5* ● K.OA.A.1* ● K.MD.B.3*	***Unit Big Ideas*** ● Attributes of two related objects ● Classify to make categories and count ● Numbers to 5 in different configurations, math drawings and expressions ● The concept of zero and working with numbers 0-5 ● Working with numbers 6-8 in different configurations. ● Working with numbers 9-10 in different configurations. ● *One more* with numbers 0-10 ● *One less* with numbers 0-10.	***Standards for Mathematical Practice:*** ● MP.2 Reason abstractly and quantitatively. ● MP.3 Construct viable arguments and critique the reasoning of others. ● MP.4 Model with mathematics. ● MP.7 Look for and make use of structure. ● MP.8 Look for and express regularity in repeated reasoning.
Unit 2: Two-Dimensional & Three-Dimensional Shapes			***Approximate length: 2.5 weeks***
	NJ Student Learning Standards: ● K.MD.B.3 ● K.G.A.1 ● K.G.A.2 ● K.G.A.3 ● K.G.B.4	***Unit Big Ideas*** ● Classifying and explaining decisions about two-dimensional flat shapes. ● Classifying and explaining decisions about three-dimensional solid shapes. ● Identifying and sorting two- and three-dimensional shapes.	***Standards for Mathematical Practice:*** ● MP.1 Make sense of problems and persevere in solving them. ● MP.3 Construct viable arguments and critique the reasoning of others. ● MP.6 Attend to precision. ● MP.7 Look for and make use of structure.

***Major work of the grade**

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Unit 3: Comparison of Length, Weight, Capacity and Numbers to 10			***Approximate length: 8.5 weeks***
	NJ Student Learning Standards: ● K.CC.C.6* ● K.CC.C.7* ● K.MD.A.1 ● K.MD.A.2	***Unit Big Ideas*** ● Comparison of length and height. ● Comparison of length and height of linking cube sticks within 10. ● Comparison of weight. ● Comparison of volume. ● Making informal comparisons using more than, fewer than and same as. ● Comparison of sets within 10. ● Comparison of numerals. ● Clarification of measurable attributes (e.g. volume, weight)	***Standards for Mathematical Practice:*** ● MP.2 Reason abstractly and quantitatively. ● MP.3 Construct viable arguments and critique the reasoning of others. ● MP.5 Use appropriate tools strategically. ● MP.6 Attend to precision. ● MP.7 Look for and make use of structure.
Unit 4: Number Pairs, Addition and Subtraction to 10			***Approximate length: 9 weeks***
	NJ Student Learning Standards: ● K.OA.A.1* ● K.OA.A.2* ● K.OA.A.3* ● K.OA.A.4* ● K.OA.A.5*[F] ***F = fluency***	***Unit Big Ideas*** ● Compositions and decompositions of 2, 3, 4 and 5. ● Decompositions of 6, 7, and 8 into number pairs. ● Addition with totals of 6, 7, and 8. ● Subtraction from numbers to 8. ● Decompositions of 9 and 10 into number pairs. ● Addition with totals of 9 and 10. ● Subtraction from 9 and 10. ● Patterns with adding 0 and 1 and making 10. ● Decompose numbers up to 10 using drawings and equations. ● Demonstrate fluency for addition and subtraction within 5.	***Standards for Mathematical Practice:*** MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.

***Major work of the grade**

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Unit 5: Numbers 10-20 & Counting to 100			*Approximate length: 6 weeks*
	NJ Student Learning Standards: ● K.CC.A.1* ● K.CC.A.2* ● K.CC.A.3* ● K.CC.B.4b* ● K.CC.B.4c* ● K.CC.B.5* ● K.NBT.1*	***Unit Big Ideas*** ● Count 10 ones and some ones ● Compose numbers 11-20 from 10 ones and some ones ● Represent and write teen numbers ● Decompose numbers 11-20 ● Count and answer "How Many" questions in varied configurations ● Extend the say ten and regular count sequence to 100 ● Represent and apply compositions and decompositions of teen numbers	***Standards for Mathematical Practice:*** MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.7 Look for and make use of structure.
Unit 6: Analyzing, Comparing & Composing Shapes			*Approximate length: 2 weeks*
	NJ Student Learning Standards: ● K.CC.B.4* ● K.G.B.5 ● K.G.B.6	***Unit Big Ideas*** ● Building and drawing flat and solid shapes ● Composing and decomposing shapes ● Year end project	***Standards for Mathematical Practice:*** MP.1 Make sense of problems and persevere in solving them. MP.4 Model with mathematics. MP.6 Attend to precision. MP.7 Look for and make use of structure.

***Major work of the grade**

Green Township School District Kindergarten Mathematics Curriculum - Revised 2017

Unit 1: Numbers to 10 **(Approximate Instructional Time: 8 weeks)**		
NJ Student Learning Standards	**Suggested Standards for Mathematical Practice**	**Critical Knowledge & Skills** ***(Learning goals are for the Unit but may not necessarily be in sequential order.)***
● K.MD.B.3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count *(benchmarked)	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.	Concept(s): Objects can be sorted and classified based on their properties. Students will be able to: ● sort and classify objects into categories **Learning Goal 1:** Classify objects into given categories and count the objects in each category (limit to 10 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.	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): ● Objects can be counted in any order. Each object is counted once (one-to-one correspondence). ● The next number name in counting is always one greater than the previous number. ● The last number name said tells the number of objects counted (conceptual understanding). Students are able to: ● say number names in the standard order. ● pair each object with one number name (one-to-one correspondence). ● count to tell the number of objects. ● count objects arranged in any order. ● identify the last number named as the number of objects counted. **Learning Goal 2**: Assign an ascending number name for each object in a group. **Learning Goal 3:** State the last number named as the number of counted objects in the set. **Learning Goal 4:** Understand that the next number name in counting as

K.CC.B.4c.Understand that each successive number name refers to a quantity that is one larger.		one greater than the previous number.
● K.CC.A.3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). *(benchmarked)	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.	Concept(s): Represent the number of objects with a numeral. Students are able to: ● Count objects and match to a numeral. ● Write numbers from 0 to 20. **Learning Goal 5 :** Sort objects into categories and represent the number of objects with a written numeral up to 20.
● 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.*(benchmarked)	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): *How many* questions Students are able to: ● count to tell the number of objects arranged in a line, rectangular array, circle, or scattered configuration. ● count to tell the number of objects when asked *how many?* questions . ● given a number from 1-10, count out that many object. **Learning Goal 6**: Answer *how many?* questions about groups of <u>up to 10</u> objects when arranged in a line, rectangular array or circle. **Learning Goal 7**: Answer *how many?* questions about groups of <u>up to 10</u> when arranged in a scattered configuration.
● K.OA.A.3. Decompose numbers less than or equal to 10 into pairs in more than one way, *e.g. using objects or drawings*, and record each decomposition by a drawing or equation *(e.g. 5 = 3 + 2 and 5 = 4 + 1)*	● MP.1 Make sense of problems and persevere in solving them. ● MP.2 Reason abstractly and quantitatively. ● MP.4 Model with mathematics. ● MP.7 Look for and make use of structure. ● MP.8 Look for and express regularity in repeated reasoning.	Concept(s): Decomposing groups ● Part-to-whole relationships ● Some groups of objects can be broken into two smaller groups while the total number remains the same. ● Some groups of objects can be broken into two smaller groups in more than one way. Students will be able to: ● decompose numbers less than or equal to ten into two numbers. ● record the decomposition with a drawing.

		• record the decomposition with an equation. • decompose the same number in more than one way. **Learning Goal 8**: Decompose numbers less than or equal to ten into pairs of numbers in more than one way and record with a drawing or equation.
Interdisciplinary Connections: **NGSS Appendix for Alignment**	***Science:*** **K-ESS2-1.** Use and share observations of local weather conditions to describe patterns over time. *Describe a beaker of water as being heavy and cold.* ***English-Language Arts:*** **RI.K.3.** With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text **SL.K.1.** Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups. A. Follow agreed-upon norms for discussions (e.g., listening to others with care and taking turns speaking about the topics and texts under discussion). B. Continue a conversation through multiple exchanges. **SL.K.3:** Ask and answer questions in order to seek help, get information, or clarify something that is not understood. **SL.K.5.** Add drawings or other visual displays to descriptions as desired to provide additional detail. **SL.K.6.** Speak audibly and express thoughts, feelings, and ideas clearly **W.K.2.** Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.	
21st Century Skills/ Career Ready Practices:	**CRP1. Act as a responsible and contributing citizen and employee.** **CRP2. Apply appropriate academic and technical skills.** **CRP3. Attend to personal health and financial well-being.** **CRP4. Communicate clearly and effectively and with reason.** **CRP5. Consider the environmental, social and economic impacts of decisions.** **CRP6. Demonstrate creativity and innovation.** **CRP7. Employ valid and reliable research strategies.** **CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.** **CRP9. Model integrity, ethical leadership and effective management.** **CRP10. Plan education and career paths aligned to personal goals.** **CRP11. Use technology to enhance productivity.** **CRP12. Work productively in teams while using cultural global competence.**	
2014 NJ Technology Standards:	**8.1 Educational Technology** (Word | PDF) All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge. **8.2 Technology Education, Engineering, Design and Computational Thinking - Programming**	

	(Word | PDF) All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. Please see relevant projects for technology standards 8.1 and 8.2:

District/School Primary and Supplementary Resources	
Primary Resource: **Eureka Math (Unbound Ed - Module 1)** **Zearn.org**	**Supplementary Resources:** Number Talks: Building Numerical Reasoning Sadlier Progress In Mathematics Online Resources - Kindergarten ***Sadlier Progress in Mathematics*** Workbook ***Excel Math*** (Publisher: AnsMar) Math Seeds Calendar Math Visual Patterns: Gr. K-12 Number Strings Common Core Progression Documents **Performance Tasks are available for use from the following sites:** Illustrative Mathematics Coherence Map Inside Mathematics Problems of the Month Kindergarten YouCubed Tasks
Materials	**Suggested Tasks for Use During Unit**
❑ *Rulers for use as a straightedge* ❑ *Five dot mat* ❑ *Five-frame and ten-frame cards* ❑ *Number path* ❑ *Left hand mat & Two hands mat* ❑ *5-group cards* ❑ *Rekenrek - available as an online resource (Slavonic abacus having beads with a color change at the five)*	K.CC.A.3 Number TIC TAC TOE K.CC.A.3 Assessing Writing Numbers K.CC.B.4 Counting Mat K.CC.B.5 Finding Equal Groups K.OA.A.1 Ten Frame Addition K.MD.B.3 Sort and Count 1

❑ *Concrete materials in individual bags for counting and sorting (white beans painted red on one side, bags of twigs, dried leaves, dry pasta, pennies; plates, forks, spoons, cups, etc.)* ❑ *Commercial concrete materials (linking cubes in tens, non-linking cubes, square-inch tiles, etc.)*	
School/District Formative Assessment Plan	**School/District Summative Assessment Plan**
● Teacher observation of students engaged in group and independent activities. ● Individual and small group conferences/interviews to assess understanding with rubric ● Self-assessment by students with guidance from teacher. ● Zearn Assessments & Teacher Reports ● Exit tickets	● Teacher created assessments and projects ● ***Eureka Math*** Mid- and End- Module Assessments (Constructed response item with rubric) ● Teacher/District created benchmark assessments
Instructional Best Practices and Exemplars	**Mathematical Terms/Vocabulary**
❑ *Number talks* ❑ *Hands-on activities* ❑ *Exploratory activities* ❑ *Games/play* ❑ *Using concrete materials to advance conceptual understanding* ❑ *Use drawings and diagrams to advance conceptual understanding* ❑ *Use of technology apps and programs to motivate and individualize instruction.*	● **Exactly the same, not exactly the same, and the same, but…**(ways to analyze objects to match or sort) ● **Match** (group items that are the same or that have the same given attribute) ● **Sort** (group objects according to a particular attribute) ● **How many?** (with reference to counting quantities or sets) ● **Hidden partners** (embedded numbers) ● **Counting path** (with reference to order of count) ● **Number story** (stories with add to or take from situations) ● **Zero** (understand the meaning of, write, and recognize) ● **Number sentence** (3 = 2 + 1) ● **5-group** (pictured right) ● **Rows and columns** (linear configuration types) ● **Number path** ● **1 more** (e.g., 4. 1 more is 5.) ● **1 less** (e.g., 4. 1 less is 3.)
Focus Mathematical Concepts	
Grade Level Fluency Requirement: **K.OA.A.5: Add and subtract within 5**	

Prerequisite skills

Refer to Achieve the Core Coherence Map for full detail on vertical and horizontal alignment to prerequisite skills & future skills.

Coherence Map

PK.CC.1 Count to 20.
PK.CC.2 Represent a number of objects with a written numeral 0–5 (with 0 representing a count of no objects).
PK.CC.3 Understand the relationship between numbers and quantities to 10; connect counting to cardinality.

- ❏ a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
- ❏ b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
- ❏ c. Understand that each successive number name refers to a quantity that is one larger.

PK.CC.4 Count to answer "how many?" questions about as many as 10 things arranged in a line, a rectangular array, or a circle, or as many as 5 things in a scattered configuration; given a number from 1–10, count out that many objects.
PK.CC.6 Identify "first" and "last" related to order or position.

Common Misconceptions

- Arrangement of objects affects amount.
- Direction of counting affects amount

Differentiation/Accommodations/Modifications

Gifted and Talented

(content, process, product and learning environment)

Extension Activities

- Conduct research and provide presentation of various topics.
- Design surveys to generate and analyze data to be used in discussion.
- Debate topics of interest / cultural importance.
- Authentic listening and reading sources that provide data and support for speaking and writing prompts.
- Exploration of art and/or artists to understand society and history.
- Implement RAFT Activities as they pertain to the types / modes of communication (role, audience, format, topic).

Anchor Activities

- Use of Higher Level Questioning Techniques

- Provide assessments at a higher level of thinking

English Language Learners

Modifications for Classrooms

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice.
- Model skills/techniques that need to be mastered.
- Extended time to complete class work
- Visual dictionaries to help build vocabulary
- Provide copy of classnotes
- Pair with a peer for assistance during class

Modifications for Homework/Assignments

- Modified Assignments
- Native Language Translation (peer, online assistive technology, translation device, bilingual dictionary)
- Extended time for assignment completion as needed
- Highlight key vocabulary
- Use graphic organizers

Students with Disabilities

(**appropriate accommodations, instructional adaptations, and/or modifications as determined by the IEP or 504 team**)

Modifications for Classroom

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice
- Model skills / techniques to be mastered.
- Extended time to complete class work
- Provide copy of classnotes
- Preferential seating to be mutually determined by the student and teacher
- Student may request to use a computer to complete assignments.
- Establish expectations for correct spelling on assignments.
- Extra textbooks for home.
- Student may request books on tape / CD / digital media, as available and appropriate.

- Assign a peer helper in the class setting
- Provide oral reminders and check student work during independent work time
- Assist student with long and short term planning of assignments
- Encourage student to proofread assignments and tests
- Provide regular parent/ school communication
- Teachers will check/sign student agenda daily
- Student requires use of other assistive technology device

Modifications for Homework and Assignments

- Extended time to complete assignments.
- Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases.
- Provide the student with clearly stated (written) expectations and grading criteria for assignments.
- Implement RAFT activities as they pertain to the types / modes of communication (role, audience, format, topic).

Modifications for Assessments

- Extended time on classroom tests and quizzes.
- Student may take/complete tests in an alternate setting as needed.
- Restate, reread, and clarify directions/questions
- Distribute study guide for classroom tests.
- Establish procedures for accommodations / modifications for assessments.

Students at Risk of School Failure

Modifications for Classroom

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice
- Model skills / techniques to be mastered.
- Extended time to complete class work
- Provide copy of classnotes
- Preferential seating to be mutually determined by the student and teacher
- Student may request to use a computer to complete assignments.
- Establish expectations for correct spelling on assignments.
- Extra textbooks for home.
- Student may request books on tape / CD / digital media, as available and appropriate.
- Assign a peer helper in the class setting
- Provide oral reminders and check student work during independent work time
- Assist student with long and short term planning of assignments
- Encourage student to proofread assignments and tests
- Provide regular parent/ school communication
- Teachers will check/sign student agenda daily

- Student requires use of other assistive technology device

Modifications for Homework and Assignments

- Extended time to complete assignments.
- Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases.
- Provide the student with clearly stated (written) expectations and grading criteria for assignments.
- Implement RAFT activities as they pertain to the types / modes of communication (role, audience, format, topic).

Modifications for Assessments

- Extended time on classroom tests and quizzes.
- Student may take/complete tests in an alternate setting as needed.
- Restate, reread, and clarify directions/questions
- Distribute study guide for classroom tests.
- Establish procedures for accommodations / modifications for assessments.

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Unit 2: Two-Dimensional & Three-Dimensional Shapes **(Approximate Instructional Time: 2 weeks)**		
NJ Student Learning Standards	**Suggested Mathematical Practices**	**Critical Knowledge & Skills** ***(Learning goals are for the Unit but may not necessarily be in sequential order.)***
● K.MD.B.3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count *(benchmarked)	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.	Concept(s): Objects can be sorted based on their properties. Students will be able to: ● use examples and non-examples when making observations about classifying objects. **Learning Goal 1**: Explain decisions about classifications of objects.
● 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, and next to.	MP.7 Look for and make use of structure.	Concept(s): ● Shapes have names. ● Positional words (above, below, besides, in front of, behind, next to) Students will be able to: ● name shapes in order to describe objects in the environment. ● use terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to* in order to describe relative positions of objects. **Learning Goal 2:** 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 orientation or overall size.	MP.7 Look for and make use of structure.	Concept(s): ● Shapes have names. ● Shapes can have the same names but appear different. Students are able to: ● correctly names shapes regardless of their orientation or overall size.

		Learning Goal 3: Correctly names shapes regardless of their orientation or overall size.
● K.G.A.3. Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid")	MP.7 Look for and make use of structure.	Concept(s): Shapes may be *flat* or *solid.* Students are able to: ● identify shapes as two-dimensional (lying in a plane, *flat*) or three-dimensional (*not flat, solid*). ● compare two- and three- dimensional shapes, in different sizes, and orientations. **Learning Goal 4:** Identify shapes as two-dimensional (lying in a plane, *flat*) or three-dimensional (*not flat, solid*).
● 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).*	MP.7 Look for and make use of structure.	Concept(s): ● Orientation does not alter attributes or size. ● Shapes may have sides of unequal or equal length. ● Shapes may or may not have the same number of sides or 'corners'. Students are able to: ● compare two- and three- dimensional shapes in different sizes and in different orientations and identify similarities and differences. ● compare parts of two- and three-dimensional shapes [e.g. number of sides, number of vertices (*corners*)]. ● compare attributes of two- and three-dimensional shapes [e.g. sides have equal length.] ● use informal language to describe similarities, differences, parts, and other attributes when comparing two-and three-dimensional shapes, in different sizes and orientations. **Learning Goal 5:** Use informal language to describe similarities, differences, parts number of sides, number of *corners*), and other attributes (having sides of equal length) when comparing two- and three-dimensional shapes, in different sizes and orientations.

Interdisciplinary Connections:	***Science:*** **K-ESS2-1.** Use and share observations of local weather conditions to describe patterns over time. ***English-Language Arts:*** **RI.K.3.** With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text **SL.K.1.** Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups. A. Follow agreed-upon norms for discussions (e.g., listening to others with care and taking turns speaking about the topics and texts under discussion). B. Continue a conversation through multiple exchanges. **SL.K.3:** Ask and answer questions in order to seek help, get information, or clarify something that is not understood. **SL.K.5.** Add drawings or other visual displays to descriptions as desired to provide additional detail. **SL.K.6.** Speak audibly and express thoughts, feelings, and ideas clearly **W.K.2.** Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.
21st Century Skills/ Career Ready Practices:	**CRP1. Act as a responsible and contributing citizen and employee.** **CRP2. Apply appropriate academic and technical skills.** **CRP3. Attend to personal health and financial well-being.** **CRP4. Communicate clearly and effectively and with reason.** **CRP5. Consider the environmental, social and economic impacts of decisions.** **CRP6. Demonstrate creativity and innovation.** **CRP7. Employ valid and reliable research strategies.** **CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.** **CRP9. Model integrity, ethical leadership and effective management.** **CRP10. Plan education and career paths aligned to personal goals.** **CRP11. Use technology to enhance productivity.** **CRP12. Work productively in teams while using cultural global competence.**
2014 NJ Technology Standards:	**8.1 Educational Technology** (Word | PDF) All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge. **8.2 Technology Education, Engineering, Design and Computational Thinking - Programming** (Word | PDF) All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. Please see relevant projects for technology standards 8.1 and 8.2:

District/School Primary and Supplementary Resources	

Green Township School District Kindergarten Mathematics Curriculum - Revised 2017

Primary Resource: **Eureka Math (Unbound Ed - Module 2)** **Zearn.org**	**Supplementary Resources:** Number Talks: Building Numerical Reasoning Sadlier Progress In Mathematics Online Resources - Kindergarten ***Sadlier Progress in Mathematics*** Workbook ***Excel Math*** (Publisher: AnsMar) Math Seeds Calendar Math 5 Senses Science Unit Visual Patterns: Gr. K-12 Number Strings Common Core Progression Documents **Performance Tasks are available for use from the following sites:** Illustrative Mathematics Coherence Map Inside Mathematics Problems of the Month Kindergarten YouCubed Tasks
Materials	**Suggested Open Educational Resources**
❑ *Three-dimensional shapes: cone, sphere, cylinder, and cube* ❑ *Two-dimensional shapes: circle, hexagon, rectangle, square, and triangle*	K.CC.A.1 Choral Counting K.CC.A.2 Start-Stop Counting K.CC.A.3 Assessing Writing Numbers K.OA.A.2 Dice Addition 2 K.OA.A.2 What's Missing? K.CC.B.5 Finding Equal Groups K.CC.C.6 Which number is greater? Which number is less? How do you know? K.CC.C.7 Guess the Marbles in the Bag K.OA.A.5 Many Ways to Do Addition 1
School/District Formative Assessment Plan	**School/District Summative Assessment Plan**
• Teacher observation of students engaged in group and independent activities. • Individual and small group conferences/interviews to assess understanding with rubric • Self-assessment by students with guidance from teacher.	• Teacher created assessments and projects • ***Eureka Math*** Mid- and End- Module Assessments • Teacher/District created benchmark assessments

- Zearn.org Teacher Reports
- Exit tickets

Instructional Best Practices and Exemplars	Mathematical Terms/Vocabulary
❑ *Number talks* ❑ *Hands-on activities* ❑ *Exploratory activities* ❑ *Games/play* ❑ *Using concrete materials to advance conceptual understanding* ❑ *Use drawings and diagrams to advance conceptual understanding* ❑ *Use of technology apps and programs to motivate and individualize instruction.*	• **Above, below, beside, in front of, next to, behind** (position words) • **Circle** • **Cone** (solid shape) • **Cube** (solid shape) • **Cylinder** (solid shape) • **Face** (flat side of a solid) *Note: In the context of polyhedra, faces must be polygonal. However, in more general contexts, a face may be circular (such as the base of a right circular cylinder), or even irregular. It is this more inclusive interpretation of face that is used in this Kindergarten module*. • **Flat** (two-dimensional shape) • **Hexagon** (flat figure enclosed by six straight sides) • **Rectangle** (flat figure enclosed by four straight sides) • **Solid** (three-dimensional shape) • **Sphere** (solid shape) • **Square** (flat figure enclosed by four straight, equal sides) • **Triangle** (flat figure enclosed by three straight sides)

Focus Mathematical Concepts

Grade Level Fluency: **K.OA.A.5: Add and subtract within 5**

Prerequisite skills:

Refer to Achieve the Core Coherence Map for full detail on vertical and horizontal alignment to prerequisite skills & future skills.

Coherence Map

Identify and describe shapes (squares, circles, triangles, rectangles).

PK.G.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *top, bottom, up, down, in front of, behind, over, under,* and *next to.*

PK.G.2 Correctly name shapes regardless of size.

Analyze, compare, and sort objects.

PK.G.3 Analyze, compare, and sort two- and three-dimensional shapes and objects, in different sizes, using informal language to describe their similarities, differences, and other attributes (e.g., color, size, and shape).

PK.G.4 Create and build shapes from components (e.g., sticks and clay balls).

Common Misconceptions:

Need to recount completed ten frame before adding on.

Differentiation/Accommodations/Modifications

Gifted and Talented

(content, process, product and learning environment)

Extension Activities

- Conduct research and provide presentation of various topics.
- Design surveys to generate and analyze data to be used in discussion.
- Debate topics of interest / cultural importance.
- Authentic listening and reading sources that provide data and support for speaking and writing prompts.
- Exploration of art and/or artists to understand society and history.
- Implement RAFT Activities as they pertain to the types / modes of communication (role, audience, format, topic).

Anchor Activities

- Use of Higher Level Questioning Techniques
- Provide assessments at a higher level of thinking

English Language Learners

Modifications for Classroom

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice.
- Model skills/techniques that need to be mastered.
- Extended time to complete class work
- Visual dictionaries to help build vocabulary
- Provide copy of classnotes
- Pair with a peer for assistance during class

Modifications for Homework/Assignments

- Modified Assignments
- Native Language Translation (peer, online assistive technology, translation device, bilingual dictionary)
- Extended time for assignment completion as needed

- Highlight key vocabulary
- Use graphic organizers

Students with Disabilities

(**appropriate accommodations, instructional adaptations, and/or modifications as determined by the IEP or 504 team**)

Modifications for Classroom

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice
- Model skills / techniques to be mastered.
- Extended time to complete class work
- Provide copy of classnotes
- Preferential seating to be mutually determined by the student and teacher
- Student may request to use a computer to complete assignments.
- Establish expectations for correct spelling on assignments.
- Extra textbooks for home.
- Student may request books on tape / CD / digital media, as available and appropriate.
- Assign a peer helper in the class setting
- Provide oral reminders and check student work during independent work time
- Assist student with long and short term planning of assignments
- Encourage student to proofread assignments and tests
- Provide regular parent/ school communication
- Teachers will check/sign student agenda daily
- Student requires use of other assistive technology device

Modifications for Homework and Assignments

- Extended time to complete assignments.
- Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases.
- Provide the student with clearly stated (written) expectations and grading criteria for assignments.
- Implement RAFT activities as they pertain to the types / modes of communication (role, audience, format, topic).

Modifications for Assessments

- Extended time on classroom tests and quizzes.
- Student may take/complete tests in an alternate setting as needed.
- Restate, reread, and clarify directions/questions
- Distribute study guide for classroom tests.
- Establish procedures for accommodations / modifications for assessments.

Students at Risk of School Failure

Modifications for Classroom

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice
- Model skills / techniques to be mastered.
- Extended time to complete class work
- Provide copy of classnotes
- Preferential seating to be mutually determined by the student and teacher
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Green Township School District Kindergarten Mathematics Curriculum - Revised 2017

Unit 3: Comparison of Length, Weight, Capacity and Numbers to 10 **(Approximate Instructional Time: 8 weeks)**		
NJ Student Learning Standards	**Suggested Mathematical Practices**	**Critical Knowledge & Skills** ***(Learning goals are for the Unit but may not necessarily be in sequential order.)***
● K.MD.A.1. Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.	MP.7 Look for and make use of structure.	Concept(s): ● Measurable attributes: length, weight, size (volume) ● A single object can have more than one measurable attribute. Students are able to: ● identify measurable attributes. ● describe the measurable attributes of multiple objects. ● describe multiple measurable attributes of a single object. **Learning Goal 1**: Describe measurable attributes of multiple objects and describe several measurable attributes of a single object.
● K.MD.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 differences. *For example, directly compare the heights of two children and describe one child as taller/shorter.*	MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): ● When comparing objects by measuring, each object must have the same starting point. ● Moving an object does not change its measure. Students are able to: ● directly compare and describe two objects with measurable attribute in common using *more of* or *less of*. **Learning Goal 2***:* Directly compare two objects with a measurable attribute in common*;* use *more of* or *less of* to compare the 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	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.	Concept(s): ● Different groups can have different numbers of objects. ● Numbers of objects can be compared using phrases such as *greater than*, *less than* and *equal to.*

group *e.g. by using matching and counting strategies.*	MP.8 Look for and express regularity in repeated reasoning.	Students will be able to: ● compare the number of objects (up to 10) in two groups. ● identify whether the number of objects in one group is greater than, less than, or equal to to the number of objects in another group. **Learning Goal 3**: Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (groups of up to 10 objects).
● K.CC.C.7. Compare two numbers between 1 and 10 presented as written numerals.	MP.2 Reason abstractly and quantitatively.	Concept(s): ● Number names and the count sequence ● The next number name in counting is always one greater than the previous number. ● Count to tell the number of objects. Students will be able to: ● compare numbers (up to 10) written as numerals. **Learning Goal 4**: Compare numbers (up to 10) written as numerals.
Interdisciplinary Connections:	***Science:*** **K-PS2-1:** Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. **K-PSA-2:** Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull. **K-LS1-1.** Use observations to describe patterns of what plants and animals (including humans) need to survive. *Science example: Directly compare a sunflower grown in the shade with a sunflower grown in sun. Which flower is taller? Observe that these plants need light to thrive.* **K-PS3:** Science example: *Directly compare a stone left in the sun with a stone left in the shade and describe one of the stones as warmer/cooler than the other.* ***English-Language Arts:*** **RI.K.3.** With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text **SL.K.1.** Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups. A. Follow agreed-upon norms for discussions (e.g., listening to others with care and taking turns speaking about the topics and texts under discussion). B. Continue a conversation through multiple exchanges. **SL.K.3:** Ask and answer questions in order to seek help, get information, or clarify something that is not understood. **SL.K.5.** Add drawings or other visual displays to descriptions as desired to provide additional detail. **SL.K.6.** Speak audibly and express thoughts, feelings, and ideas clearly	

	W.K.2. Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.
21st Century Skills/ Career Ready Practices:	**CRP1. Act as a responsible and contributing citizen and employee.** **CRP2. Apply appropriate academic and technical skills.** **CRP3. Attend to personal health and financial well-being.** **CRP4. Communicate clearly and effectively and with reason.** **CRP5. Consider the environmental, social and economic impacts of decisions.** **CRP6. Demonstrate creativity and innovation.** **CRP7. Employ valid and reliable research strategies.** **CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.** **CRP9. Model integrity, ethical leadership and effective management.** **CRP10. Plan education and career paths aligned to personal goals.** **CRP11. Use technology to enhance productivity.** **CRP12. Work productively in teams while using cultural global competence.**
2014 NJ Technology Standards:	**8.1 Educational Technology** (Word | PDF) All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge. **8.2 Technology Education, Engineering, Design and Computational Thinking - Programming** (Word | PDF) All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. Please see relevant projects for technology standards 8.1 and 8.2:

District/School Primary and Supplementary Resources	
Primary Resource: **Eureka Math (Unbound Ed - Module 3)** **Zearn.org**	**Supplementary Resources:** Number Talks: Building Numerical Reasoning Sadlier Progress In Mathematics Online Resources - Kindergarten ***Sadlier Progress in Mathematics*** Workbook ***Excel Math*** (Publisher: AnsMar) Math Seeds Calendar Math 5 Senses Science Unit Visual Patterns: Gr. K-12

	Number Strings Common Core Progression Documents **Performance Tasks are available for use from the following sites:** Illustrative Mathematics Coherence Map Inside Mathematics Problems of the Month Kindergarten YouCubed Tasks
Suggested Materials	**Suggested Tasks for Use During Unit**
❏ *Balance scales* ❏ *Online Scale activity* ❏ *Centimeter cubes* ❏ *Clay* ❏ *Linking cubes in sticks with a color change at the five* ❏ *Plastic cups and containers for measuring volume*	K.CC.A.1 Assessing Counting Sequences Part 1 K.MD.A.1 Which is heavier? K.MD.A.2 Which is Longer? K.MD.B.3 Sort and Count 2 K.OA.A.3 Shake and Spill K.OA.A.3 Pick Two K.NBT.A.1 What Makes a Teen Number K.OA.A.5 My Book of Five
School/District Formative Assessment Plan	**School/District Summative Assessment Plan**
• Teacher observation of students engaged in group and independent activities. • Individual and small group conferences/interviews to assess understanding with rubric • Self-assessment by students with guidance from teacher. • Zearn.org Teacher Reports • Exit tickets	• Teacher created assessments and projects • ***Eureka Math*** Mid- and End- Module Assessments (Constructed Response items with Rubric) • Teacher/District created benchmark assessments
Instructional Best Practices and Exemplars	**Mathematical Terms/Vocabulary**
❏ *Number talks* ❏ *Hands-on activities* ❏ *Exploratory activities* ❏ *Games/play* ❏ *Using concrete materials to advance conceptual understanding* ❏ *Use drawings and diagrams to advance conceptual understanding* ❏ *Use of technology apps and programs to motivate and individualize instruction.*	• **Balance scale** (tool for weight measurement) • **Capacity** (with reference to volume) • **Compare** (specifically using direct comparison) • **Endpoint** (with reference to alignment for direct comparison) • **Enough/not enough** (comparative term) • **Heavier than/lighter than** (weight comparison) • **Height** (vertical distance measurement from bottom to top) • **Length** (distance measurement from end to end; in a rectangular shape,

	length can be used to describe any of the four sides) • **Longer than/shorter than** (length comparison) • **More than/fewer than** (discrete quantity comparison) • **More than/less than** (volume, area, and number comparisons) • **Taller than/shorter than** (height comparison) • **The same as** (comparative term) • **Weight** (heaviness measurement)

Focus Mathematical Concepts

Grade Level Fluency: **K.OA.A.5: Add and subtract within 5**

Prerequisite skills:

Refer to Achieve the Core Coherence Map for full detail on vertical and horizontal alignment to prerequisite skills & future skills.

Coherence Map

PK.CC.5 Identify whether the number of objects in one group is more, less, greater than, fewer, and/or equal to the number of objects in another group, e.g., by using matching and counting strategies.1
PK.CC.6 Identify "first" and "last" related to order or position.
PK.MD.1 Identify measurable attributes of objects, such as length and weight. Describe them using correct vocabulary (e.g., small, big, short, tall, empty, full, heavy, and light).
Common Misconceptions:
Counting by 1s, 2s, 5s, or 10s will change the sum.

Differentiation/Accommodations/Modifications

Gifted and Talented

(content, process, product and learning environment)

Extension Activities

- Conduct research and provide presentation of various topics.
- Design surveys to generate and analyze data to be used in discussion.
- Debate topics of interest / cultural importance.
- Authentic listening and reading sources that provide data and support for speaking and writing prompts.
- Exploration of art and/or artists to understand society and history.
- Implement RAFT Activities as they pertain to the types / modes of communication (role, audience, format, topic).

Anchor Activities

- Use of Higher Level Questioning Techniques
- Provide assessments at a higher level of thinking

English Language Learners

Modifications for Classroom

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice.
- Model skills/techniques that need to be mastered.
- Extended time to complete class work
- Visual dictionaries to help build vocabulary
- Provide copy of classnotes
- Pair with a peer for assistance during class

Modifications for Homework/Assignments

- Modified Assignments
- Native Language Translation (peer, online assistive technology, translation device, bilingual dictionary)
- Extended time for assignment completion as needed
- Highlight key vocabulary
- Use graphic organizers

Students with Disabilities

(**appropriate accommodations, instructional adaptations, and/or modifications as determined by the IEP or 504 team**)

Modifications for Classroom

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice
- Model skills / techniques to be mastered.
- Extended time to complete class work
- Provide copy of classnotes
- Preferential seating to be mutually determined by the student and teacher
- Student may request to use a computer to complete assignments.

- Establish expectations for correct spelling on assignments.
- Extra textbooks for home.
- Student may request books on tape / CD / digital media, as available and appropriate.
- Assign a peer helper in the class setting
- Provide oral reminders and check student work during independent work time
- Assist student with long and short term planning of assignments
- Encourage student to proofread assignments and tests
- Provide regular parent/ school communication
- Teachers will check/sign student agenda daily
- Student requires use of other assistive technology device

Modifications for Homework and Assignments

- Extended time to complete assignments.
- Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases.
- Provide the student with clearly stated (written) expectations and grading criteria for assignments.
- Implement RAFT activities as they pertain to the types / modes of communication (role, audience, format, topic).

Modifications for Assessments

- Extended time on classroom tests and quizzes.
- Student may take/complete tests in an alternate setting as needed.
- Restate, reread, and clarify directions/questions
- Distribute study guide for classroom tests.
- Establish procedures for accommodations / modifications for assessments.

Students at Risk of School Failure

Modifications for Classroom

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice
- Model skills / techniques to be mastered.
- Extended time to complete class work
- Provide copy of classnotes
- Preferential seating to be mutually determined by the student and teacher
- Student may request to use a computer to complete assignments.
- Establish expectations for correct spelling on assignments.
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- Encourage student to proofread assignments and tests
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Green Township School District Kindergarten Mathematics Curriculum - Revised 2017

Unit 4: Number Pairs, Addition & Subtraction to 10

(Approximate Instructional Time: 9 weeks)

NJ Student Learning Standards	Suggested Mathematical Practices	Critical Knowledge & Skills ***(Learning goals are for the Unit but may not necessarily be in sequential order.)***
• K.OA.A.1. Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. *(benchmarked)	MP.1 Make sense of problems and persevere in solving them. MP. 2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Understand addition as putting together and adding to. • Understand subtraction as taking apart and taking from. Students are able to: • create subtraction and addition events with objects (up to 10). • create subtraction and addition events with drawings and sounds (up to 10). • create subtraction and addition events by acting out situations and with verbal explanations. **Learning Goal 1:** Represent composition and decomposition of number to 5 using pictorial and numeric number bonds.
• K.OA.A.5. Demonstrate fluency for addition and subtraction within 5 (by the end of Kindergarten). *(benchmarked)	MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • add and subtract within 5 with accuracy and efficiency. **Learning Goal 2:** Fluently add and subtract within 5 using a variety of strategies.
• K.OA.A.3. Decompose numbers less than or equal to 10 into pairs in more than one way, *e.g. using objects or drawings*, and record each decomposition by a drawing or equation *(e.g. 5 = 3 + 2 and 5 = 4 + 1)*	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Part-to-whole relationships • Some groups of objects can be broken into two smaller groups while the total number remains the same. • Some groups of objects can be broken into two smaller groups in more than one way. Students will be able to: • decompose numbers less than or equal to ten into two numbers. • record the decomposition with a drawing/number bond.

		• record the decomposition with an equation. • decompose the same number in more than one way. **Learning Goal 3:** Decompose numbers less than or equal to ten into pairs of numbers in more than one way and record with a drawing, number bonds, expressions and equations.
• K.OA.A.4. For any number from 1 to 9, find the number that makes 10 when added to the given number *e.g. by using objects or drawings*, and record the answer with a drawing or equation.	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • find a missing part of 10 using objects. • given a number from 1 to 9, use drawings, expressions or equations to find the number that makes 10. **Learning Goal 4*:*** Given a number less than 10, find the number that makes 10.
• 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.*	MP.1 Make sense of problems and persevere in solving them. MP. 2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically.	Concept(s): No new concept(s) introduced Students will be able to: • use objects and drawings to represent addition and subtraction. • add and subtract within 10. **Learning Goal 5:** Use objects or drawings to represent and solve addition and subtraction word problems (within 10).
Interdisciplinary Connections:	***Science:*** **K-ESS2-1.** Use and share observations of local weather conditions to describe patterns over time. ***English-Language Arts:*** **RI.K.3.** With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text **SL.K.1.** Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups. A. Follow agreed-upon norms for discussions (e.g., listening to others with care and taking turns speaking about the topics and texts under discussion). B. Continue a conversation through multiple exchanges. **SL.K.3:** Ask and answer questions in order to seek help, get information, or clarify something that is not understood. **SL.K.5.** Add drawings or other visual displays to descriptions as desired to provide additional detail. **SL.K.6.** Speak audibly and express thoughts, feelings, and ideas clearly **W.K.2.** Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.	

21st Century Skills/ Career Ready Practices:	**CRP1. Act as a responsible and contributing citizen and employee.** **CRP2. Apply appropriate academic and technical skills.** **CRP3. Attend to personal health and financial well-being.** **CRP4. Communicate clearly and effectively and with reason.** **CRP5. Consider the environmental, social and economic impacts of decisions.** **CRP6. Demonstrate creativity and innovation.** **CRP7. Employ valid and reliable research strategies.** **CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.** **CRP9. Model integrity, ethical leadership and effective management.** **CRP10. Plan education and career paths aligned to personal goals.** **CRP11. Use technology to enhance productivity.** **CRP12. Work productively in teams while using cultural global competence.**
2014 NJ Technology Standards:	**8.1 Educational Technology** (Word | PDF) All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge. **8.2 Technology Education, Engineering, Design and Computational Thinking - Programming** (Word | PDF) All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. Please see relevant projects for technology standards 8.1 and 8.2:

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	Performance Tasks are available for use from the following sites: Illustrative Mathematics Coherence Map Inside Mathematics Problems of the Month Kindergarten YouCubed Tasks
Materials	**Suggested Tasks for Use During Unit**
❑ *5-group dot cards* ❑ *Hula hoops* ❑ *Linking cubes* ❑ *Number bonds* ❑ *Number path* ❑ *Number towers* ❑ *Sets of objects* ❑ *Showing fingers the Math Way*	K.OA.A.2 Dice Addition 2 K.OA.A.2 What's Missing? K.OA.A.3 Shake and Spill K.OA.A.3 Pick Two K.OA.A.5 My Book of Five K.OA.A.5 Many Ways to Do Addition 1
School/District Formative Assessment Plan	**School/District Summative Assessment Plan**
• Teacher observation of students engaged in group and independent activities. • Individual and small group conferences/interviews to assess understanding with rubric • Self-assessment by students with guidance from teacher. • Zearn.org Teacher Reports • Exit tickets	• Teacher created assessments and projects • Lesson 41 Culminating Task • ***Eureka Math*** Mid- and End- Module Assessments (Constructed response items with rubric) • Teacher/District created benchmark assessments
Instructional Best Practices and Exemplars	
❑ *Number talks* ❑ *Hands-on activities* ❑ *Exploratory activities* ❑ *Games/play* ❑ *Using concrete materials to advance conceptual understanding* ❑ *Use drawings and diagrams to advance conceptual understanding* ❑ *Use of technology apps and programs to motivate and individualize instruction.*	• **Addition** (specifically using add to with result unknown, put together with total unknown, put together with both addends unknown) • **Addition and subtraction sentences** (equations) • **Make 10** (combine two numbers from 1 to 9 that add up to 10) • **Minus** (–) • **Number bond** (mathematical model) • **Number pairs or partners** (embedded numbers) • **Part** (addend or embedded number) • **Put together** (add) • **Subtraction** (specifically using take from with result unknown) • **Take apart** (decompose) • **Take away** (subtract) • **Whole** (total)

Focus Mathematical Concepts

Grade Level Fluency Requirement: **K.OA.A.5: Add and subtract within 5**

Prerequisite skills

Refer to Achieve the Core Coherence Map for full detail on vertical and horizontal alignment to prerequisite skills & future skills.

Coherence Map

PK.OA.1 Demonstrate an understanding of addition and subtraction by using objects, fingers, and responding to practical situations (e.g., If we have 3 apples and add two more, how many apples do we have all together?).

PK.OA.2 Duplicate and extend (e.g., What comes next?) simple patterns using concrete objects.

Differentiation/Accommodations/Modifications

Gifted and Talented

(content, process, product and learning environment)

Extension Activities

- Conduct research and provide presentation of various topics.
- Design surveys to generate and analyze data to be used in discussion.
- Debate topics of interest / cultural importance.
- Authentic listening and reading sources that provide data and support for speaking and writing prompts.
- Exploration of art and/or artists to understand society and history.
- Implement RAFT Activities as they pertain to the types / modes of communication (role, audience, format, topic).

Anchor Activities

- Use of Higher Level Questioning Techniques
- Provide assessments at a higher level of thinking

English Language Learners

Modifications for Classroom

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice.
- Model skills/techniques that need to be mastered.
- Extended time to complete class work
- Visual dictionaries to help build vocabulary
- Provide copy of classnotes
- Pair with a peer for assistance during class

Modifications for Homework/Assignments

- Modified Assignments
- Native Language Translation (peer, online assistive technology, translation device, bilingual dictionary)
- Extended time for assignment completion as needed
- Highlight key vocabulary
- Use graphic organizers

Students with Disabilities

(**appropriate accommodations, instructional adaptations, and/or modifications as determined by the IEP or 504 team**)

Modifications for Classroom

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice
- Model skills / techniques to be mastered.
- Extended time to complete class work
- Provide copy of classnotes
- Preferential seating to be mutually determined by the student and teacher
- Student may request to use a computer to complete assignments.
- Establish expectations for correct spelling on assignments.
- Extra textbooks for home.
- Student may request books on tape / CD / digital media, as available and appropriate.
- Assign a peer helper in the class setting
- Provide oral reminders and check student work during independent work time
- Assist student with long and short term planning of assignments
- Encourage student to proofread assignments and tests
- Provide regular parent/ school communication
- Teachers will check/sign student agenda daily
- Student requires use of other assistive technology device

Modifications for Homework and Assignments

- Extended time to complete assignments.
- Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases.
- Provide the student with clearly stated (written) expectations and grading criteria for assignments.
- Implement RAFT activities as they pertain to the types / modes of communication (role, audience, format, topic).

Modifications for Assessments

- Extended time on classroom tests and quizzes.
- Student may take/complete tests in an alternate setting as needed.
- Restate, reread, and clarify directions/questions
- Distribute study guide for classroom tests.
- Establish procedures for accommodations / modifications for assessments.

Students at Risk of School Failure

Modifications for Classroom

- Pair visual prompts with verbal presentations
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- Repetition and practice
- Model skills / techniques to be mastered.
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- Student may take/complete tests in an alternate setting as needed.
- Restate, reread, and clarify directions/questions
- Distribute study guide for classroom tests.
- Establish procedures for accommodations / modifications for assessments.

Green Township School District Kindergarten Mathematics Curriculum - Revised 2017

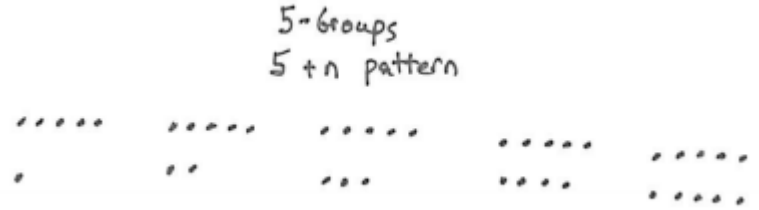
Unit 5: Numbers 10-20 & Counting to 100 **(Approximate Instructional Time: 6 weeks)**		
NJ Student Learning Standards	**Suggested Mathematical Practices**	**Critical Knowledge & Skills** ***(Learning goals are for the Unit but may not necessarily be in sequential order.)***
● K.CC.A.1. Count to 100 by ones and by tens. *(benchmarked)	MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): ● Number names and the count sequence up to 100 Students are able to: ● count orally by ones up to 100. ● count orally by tens up to 100. **Learning Goal 1:** Count to 100 by ones and by tens.
● K.CC.A.3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).*(benchmarked)	MP. 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.	Concept(s): ● The number of objects can be represented by a numeral. Students are able to: ● write numbers from 0 to 20. **Learning Goal 2:** Represent a number of objects with a written numeral 0 to 20.
● K.CC.B.4. Understand the relationship between numbers and quantities; connect counting to cardinality. 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	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): ● The next number name in counting is always one greater than the previous number. ● The last number name said tells the number of objects counted. Students are able to: ● count to tell the number of objects. ● count objects arranged in any order. ● identify the last number named as the number of objects counted. **Learning Goal 3:** State the last number named as the number of counted objects in the set. **Learning Goal 4:** Identify the next number name in counting as one greater

which they were counted. K.CC.B.4c.Understand that each successive number name refers to a quantity that is one larger.		than the previous number.
● 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. *(benchmarked)	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): *How many* questions Students are able to: ● count to tell the number of objects arranged in a line, rectangular array, circle, or scattered configuration. ● count to tell the number of objects when asked *how many?* questions . ● given a number from 1-10, count out that many object. **Learning Goal 5:** Answer *how many?* questions about groups of <u>up to 10</u> objects when arranged in a line, rectangular array or circle. **Learning Goal 6**: Answer *how many?* questions about groups of <u>up to 5</u> when arranged in a scattered configuration.
● K.CC.A.2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): Counting up to 50 Students will be able to: ● count orally by ones <u>up to 50</u>, beginning at any number. **Learning Goal 7:** Count forward <u>up to 50</u> starting from numbers other than one.
● K.NBT.A.1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, *e.g. by using objects or drawings*, and record each composition or decomposition by a drawing or equation *(e.g. 18 = 10 + 8);* Understand that these numbers are composed of ten ones and one, two, three, four, five, six,	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.7 Look for and make use of structure.	Concept(s): ● Numbers from 11 to 19 can be represented as one group of ten *ones* and another group containing fewer than ten *ones*. Students are able to: ● compose and decompose numbers from 11 to 19 into a group of ten *ones* and another group of one(s). ● use the term *ones* to describe the number of objects in each group. ● record each composition or decomposition using objects and drawings.

seven, eight, or nine ones. *(benchmarked)	MP.8 Look for and express regularity in repeated reasoning.	• record each composition or decomposition by a drawing or equation. **Learning Goal 8*:*** Compose and decompose numbers from 11 to 19 into a group of ten and one(s) with or without manipulatives*;* record each composition or decomposition through a drawing or equation.
Interdisciplinary Connections:	***Science:*** **K-ESS2-1.** Use and share observations of local weather conditions to describe patterns over time. ***English-Language Arts:*** **RI.K.3.** With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text **SL.K.1.** Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups. A. Follow agreed-upon norms for discussions (e.g., listening to others with care and taking turns speaking about the topics and texts under discussion). B. Continue a conversation through multiple exchanges. **SL.K.3:** Ask and answer questions in order to seek help, get information, or clarify something that is not understood. **SL.K.5.** Add drawings or other visual displays to descriptions as desired to provide additional detail. **SL.K.6.** Speak audibly and express thoughts, feelings, and ideas clearly **W.K.2.** Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.	
21st Century Skills/ Career Ready Practices:	**CRP1. Act as a responsible and contributing citizen and employee.** **CRP2. Apply appropriate academic and technical skills.** **CRP3. Attend to personal health and financial well-being.** **CRP4. Communicate clearly and effectively and with reason.** **CRP5. Consider the environmental, social and economic impacts of decisions.** **CRP6. Demonstrate creativity and innovation.** **CRP7. Employ valid and reliable research strategies.** **CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.** **CRP9. Model integrity, ethical leadership and effective management.** **CRP10. Plan education and career paths aligned to personal goals.** **CRP11. Use technology to enhance productivity.** **CRP12. Work productively in teams while using cultural global competence.**	
2014 NJ Technology Standards:	**8.1 Educational Technology** (Word | PDF) All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge. **8.2 Technology Education, Engineering, Design and Computational Thinking - Programming** (Word | PDF) All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.	

	Please see relevant projects for technology standards 8.1 and 8.2:

District/School Primary and Supplementary Resources	
Primary Resource: **Eureka Math (Unbound Ed - Module 1)** **Zearn.org**	**Supplementary Resources:** Number Talks: Building Numerical Reasoning Sadlier Progress In Mathematics Online Resources - Kindergarten ***Sadlier Progress in Mathematics*** Workbook ***Excel Math*** (Publisher: AnsMar) Math Seeds Calendar Math Visual Patterns: Gr. K-12 Number Strings Common Core Progression Documents **Performance Tasks are available for use from the following sites:** Illustrative Mathematics Coherence Map Inside Mathematics Problems of the Month Kindergarten YouCubed Tasks
Suggested Materials	**Suggested Tasks for Use During Unit**
❑ *50 sticks or straws for each group of 2 students* ❑ *Student-made Rekenrek (pictured to the right): 10 red and 10 white pony beads, 1 cardboard strip, 2 elastics* ❑ *1 egg carton per pair of students with 2 slots cut off to make a carton with 10 slots* ❑ *Hide Zero cards (called Place Value cards in later grades)* ❑ *Objects to put in the egg carton such as mandarin oranges, plastic eggs, or beans Single and double ten-frames* ❑ *Linking cubes: ideally 10 of two different colors per student* ❑ *Number bond template*	K.CC.A.1 Choral Counting K.CC.A.1 Counting by Tens K.CC.A.1 Assessing Counting Sequences Part 1 K.CC.A.2 Start-Stop Counting K.CC Cumulative More & Less Handfuls K.NBT.A.1 What Makes a Teen Number

School/District Formative Assessment Plan	**School/District Summative Assessment Plan**
● Teacher observation of students engaged in group and independent activities. ● Individual and small group conferences/interviews to assess understanding with rubric ● Self-assessment by students with guidance from teacher. ● Zearn.org Teacher Reports ● Exit tickets	● Teacher created assessments and projects ● ***Eureka Math*** Mid- and End- Module Assessments(Constructed response item with rubric) ● Teacher/District created benchmark assessments
Instructional Best Practices and Exemplars	
❑ *Number talks* ❑ *Hands-on activities* ❑ *Exploratory activities* ❑ *Games/play* ❑ *Using concrete materials to advance conceptual understanding* ❑ *Use drawings and diagrams to advance conceptual understanding* ❑ *Use of technology apps and programs to motivate and individualize instruction.*	● **Exactly the same, not exactly the same, and the same, but…**(ways to analyze objects to match or sort) ● **Match** (group items that are the same or that have the same given attribute) ● **Sort** (group objects according to a particular attribute) ● **How many?** (with reference to counting quantities or sets) ● **Hidden partners** (embedded numbers) ● **Counting path** (with reference to order of count) ● **Number story** (stories with add to or take from situations) ● **Zero** (understand the meaning of, write, and recognize) ● **Number sentence** (3 = 2 + 1) ● **5-group** (pictured below)  ● **Rows and columns** (linear configuration types) ● **Number path** ● **1 more** (e.g., 4. 1 more is 5.) ● **1 less** (e.g., 4. 1 less is 3.)

Focus Mathematical Concepts

Grade Level Fluency Requirement: **K.OA.A.5: Add and subtract within 5**

Prerequisite skills

Refer to Achieve the Core Coherence Map for full detail on vertical and horizontal alignment to prerequisite skills & future skills.

Coherence Map

New concept for this grade level.

Differentiation/Accommodations/Modifications

Gifted and Talented

(content, process, product and learning environment)

Extension Activities

- Conduct research and provide presentation of various topics.
- Design surveys to generate and analyze data to be used in discussion.
- Debate topics of interest / cultural importance.
- Authentic listening and reading sources that provide data and support for speaking and writing prompts.
- Exploration of art and/or artists to understand society and history.
- Implement RAFT Activities as they pertain to the types / modes of communication (role, audience, format, topic).

Anchor Activities

- Use of Higher Level Questioning Techniques
- Provide assessments at a higher level of thinking

English Language Learners

Modifications for Classroom

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice.
- Model skills/techniques that need to be mastered.
- Extended time to complete class work
- Visual dictionaries to help build vocabulary
- Provide copy of classnotes
- Pair with a peer for assistance during class

Modifications for Homework/Assignments

- Modified Assignments
- Native Language Translation (peer, online assistive technology, translation device, bilingual dictionary)
- Extended time for assignment completion as needed
- Highlight key vocabulary
- Use graphic organizers

Students with Disabilities

(**appropriate accommodations, instructional adaptations, and/or modifications as determined by the IEP or 504 team**)

Modifications for Classroom

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice
- Model skills / techniques to be mastered.
- Extended time to complete class work
- Provide copy of classnotes
- Preferential seating to be mutually determined by the student and teacher
- Student may request to use a computer to complete assignments.
- Establish expectations for correct spelling on assignments.
- Extra textbooks for home.
- Student may request books on tape / CD / digital media, as available and appropriate.
- Assign a peer helper in the class setting
- Provide oral reminders and check student work during independent work time
- Assist student with long and short term planning of assignments
- Encourage student to proofread assignments and tests
- Provide regular parent/ school communication
- Teachers will check/sign student agenda daily

- Student requires use of other assistive technology device

Modifications for Homework and Assignments
- Extended time to complete assignments.
- Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases.
- Provide the student with clearly stated (written) expectations and grading criteria for assignments.
- Implement RAFT activities as they pertain to the types / modes of communication (role, audience, format, topic).

Modifications for Assessments
- Extended time on classroom tests and quizzes.
- Student may take/complete tests in an alternate setting as needed.
- Restate, reread, and clarify directions/questions
- Distribute study guide for classroom tests.
- Establish procedures for accommodations / modifications for assessments.

Students at Risk of School Failure

Modifications for Classroom
- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice
- Model skills / techniques to be mastered.
- Extended time to complete class work
- Provide copy of classnotes
- Preferential seating to be mutually determined by the student and teacher
- Student may request to use a computer to complete assignments.
- Establish expectations for correct spelling on assignments.
- Extra textbooks for home.
- Student may request books on tape / CD / digital media, as available and appropriate.
- Assign a peer helper in the class setting
- Provide oral reminders and check student work during independent work time
- Assist student with long and short term planning of assignments
- Encourage student to proofread assignments and tests
- Provide regular parent/ school communication
- Teachers will check/sign student agenda daily
- Student requires use of other assistive technology device

Modifications for Homework and Assignments
- Extended time to complete assignments.
- Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases.
- Provide the student with clearly stated (written) expectations and grading criteria for assignments.

- Implement RAFT activities as they pertain to the types / modes of communication (role, audience, format, topic).

Modifications for Assessments

- Extended time on classroom tests and quizzes.
- Student may take/complete tests in an alternate setting as needed.
- Restate, reread, and clarify directions/questions
- Distribute study guide for classroom tests.
- Establish procedures for accommodations / modifications for assessments.

Green Township School District Kindergarten Mathematics Curriculum - Revised 2017

Unit 6: Analyzing, Comparing & Composing Shapes **(Approximate Instructional Time: 2 weeks)**		
NJ Student Learning Standards	**Suggested Mathematical Practices**	**Critical Knowledge & Skills** ***(Learning goals are for the Unit but may not necessarily be in sequential order.)***
● K.CC.B.4. Understand the relationship between numbers and quantities; connect counting to cardinality.	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): ● Ordinal numbers represent position Students are able to: ● understand ordinal numbers represent position **Learning Goal 1:** Describe the relative position of an object using ordinal numbers, e.g. first, second, etc.
● K.G.B.5. Model shapes in the world by building shapes from components *(e.g., sticks and clay balls)* and drawing shapes.	MP.1 Make sense of problems and persevere in solving them. MP.4 Model with mathematics. MP.7 Look for and make use of structure.	Concept(s): ● Basic shapes exist in real world objects. Students are able to: ● recognize basic shapes in the real world. ● use objects (clay, sticks, etc) to model shapes. ● model shapes in the world by drawing shapes. **Learning Goal 2:** Model shapes in the world by building 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?"*	MP.1 Make sense of problems and persevere in solving them. MP.4 Model with mathematics. MP.7 Look for and make use of structure.	Concept(s): ● Shapes can be combined to make larger shapes. Students are able to: ● compose simple shapes to form larger shapes. **Learning Goal 3***:* Compose simple shapes to form larger shapes.

Interdisciplinary Connections:	***Science:*** **K-ESS2-1.** Use and share observations of local weather conditions to describe patterns over time. ***English-Language Arts:*** **RI.K.3.** With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text **SL.K.1.** Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups. A. Follow agreed-upon norms for discussions (e.g., listening to others with care and taking turns speaking about the topics and texts under discussion). B. Continue a conversation through multiple exchanges. **SL.K.3:** Ask and answer questions in order to seek help, get information, or clarify something that is not understood. **SL.K.5.** Add drawings or other visual displays to descriptions as desired to provide additional detail. **SL.K.6.** Speak audibly and express thoughts, feelings, and ideas clearly **W.K.2.** Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.	
21st Century Skills/ Career Ready Practices:	**CRP1. Act as a responsible and contributing citizen and employee.** **CRP2. Apply appropriate academic and technical skills.** **CRP3. Attend to personal health and financial well-being.** **CRP4. Communicate clearly and effectively and with reason.** **CRP5. Consider the environmental, social and economic impacts of decisions.** **CRP6. Demonstrate creativity and innovation.** **CRP7. Employ valid and reliable research strategies.** **CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.** **CRP9. Model integrity, ethical leadership and effective management.** **CRP10. Plan education and career paths aligned to personal goals.** **CRP11. Use technology to enhance productivity.** **CRP12. Work productively in teams while using cultural global competence.**	
2014 NJ Technology Standards:	**8.1 Educational Technology** (Word | PDF) All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge. **8.2 Technology Education, Engineering, Design and Computational Thinking - Programming** (Word | PDF) All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. Please see relevant projects for technology standards 8.1 and 8.2:	

District/School Primary and Supplementary Resources	

Green Township School District Kindergarten Mathematics Curriculum - Revised 2017

Primary Resource: **Eureka Math (Unbound Ed - Module 6)** **Zearn.org**	**Supplementary Resources:** Number Talks: Building Numerical Reasoning Sadlier Progress In Mathematics Online Resources - Kindergarten ***Sadlier Progress in Mathematics*** Workbook ***Excel Math*** (Publisher: AnsMar) Math Seeds Calendar Math Visual Patterns: Gr. K-12 Number Strings Common Core Progression Documents **Performance Tasks are available for use from the following sites:** Illustrative Mathematics Coherence Map Inside Mathematics Problems of the Month Kindergarten YouCubed Tasks
Materials	**Suggested Tasks for Use During Unit**
❑ *Pattern block activity cards or attribute block activity cards* ❑ *Three-dimensional shapes: cone, sphere, cylinder, and cube* ❑ *Two-dimensional shapes: circle, hexagon, rectangle, square, and triangle*	*Unit 6 emphasizes students building models and hands-on activities should be used to enhance conceptual understanding. Refer to previous suggested tasks and/or others on Illustrative Mathematics and other suggested websites.*
School/District Formative Assessment Plan	**School/District Summative Assessment Plan**
• Teacher observation of students engaged in group and independent activities. • Individual and small group conferences/interviews to assess understanding with rubric • Self-assessment by students with guidance from teacher. • Zearn.org Teacher Reports • Exit tickets	• Teacher created assessments and projects • ***Eureka Math*** Mid- and End- Module Assessments (Constructed response item with rubric) • Teacher/District created benchmark assessments
Instructional Best Practices and Exemplars	**Mathematical Terms/Vocabulary**
❑ *Number talks* ❑ *Hands-on activities*	• **Ordinal numbers** (First, second, third, fourth, fifth, sixth, seventh, eighth, ninth, tenth)

❑ *Exploratory activities* ❑ *Games/play* ❑ *Using concrete materials to advance conceptual understanding* ❑ *Use drawings and diagrams to advance conceptual understanding* ❑ *Use of technology apps and programs to motivate and individualize instruction.*	

Focus Mathematical Concepts

Grade Level Fluency Requirement: **K.OA.A.5: Add and subtract within 5**

Prerequisite skills

Refer to Achieve the Core Coherence Map for full detail on vertical and horizontal alignment to prerequisite skills & future skills.

Coherence Map

PK.CC.6 Identify "first" and "last" related to order or position.
PK.G.3 Analyze, compare, and sort two- and three-dimensional shapes and objects, in different sizes, using informal language to describe their similarities, differences, and other attributes (e.g., color, size, and shape).
PK.G.4 Create and build shapes from components (e.g., sticks and clay balls).

Differentiation/Accommodations/Modifications

Gifted and Talented

(content, process, product and learning environment)

Extension Activities

- Conduct research and provide presentation of various topics.
- Design surveys to generate and analyze data to be used in discussion.
- Debate topics of interest / cultural importance.
- Authentic listening and reading sources that provide data and support for speaking and writing prompts.
- Exploration of art and/or artists to understand society and history.
- Implement RAFT Activities as they pertain to the types / modes of communication (role, audience, format, topic).

Anchor Activities

- Use of Higher Level Questioning Techniques

- Provide assessments at a higher level of thinking

English Language Learners

Modifications for Classroom

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice.
- Model skills/techniques that need to be mastered.
- Extended time to complete class work
- Visual dictionaries to help build vocabulary
- Provide copy of classnotes
- Pair with a peer for assistance during class

Modifications for Homework/Assignments

- Modified Assignments
- Native Language Translation (peer, online assistive technology, translation device, bilingual dictionary)
- Extended time for assignment completion as needed
- Highlight key vocabulary
- Use graphic organizers

Students with Disabilities

(**appropriate accommodations, instructional adaptations, and/or modifications as determined by the IEP or 504 team**)

Modifications for Classroom

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice
- Model skills / techniques to be mastered.
- Extended time to complete class work
- Provide copy of classnotes
- Preferential seating to be mutually determined by the student and teacher
- Student may request to use a computer to complete assignments.
- Establish expectations for correct spelling on assignments.
- Extra textbooks for home.
- Student may request books on tape / CD / digital media, as available and appropriate.
- Assign a peer helper in the class setting

- Provide oral reminders and check student work during independent work time
- Assist student with long and short term planning of assignments
- Encourage student to proofread assignments and tests
- Provide regular parent/ school communication
- Teachers will check/sign student agenda daily
- Student requires use of other assistive technology device

Modifications for Homework and Assignments

- Extended time to complete assignments.
- Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases.
- Provide the student with clearly stated (written) expectations and grading criteria for assignments.
- Implement RAFT activities as they pertain to the types / modes of communication (role, audience, format, topic).

Modifications for Assessments

- Extended time on classroom tests and quizzes.
- Student may take/complete tests in an alternate setting as needed.
- Restate, reread, and clarify directions/questions
- Distribute study guide for classroom tests.
- Establish procedures for accommodations / modifications for assessments.

Students at Risk of School Failure

Modifications for Classroom

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Repetition and practice
- Model skills / techniques to be mastered.
- Extended time to complete class work
- Provide copy of classnotes
- Preferential seating to be mutually determined by the student and teacher
- Student may request to use a computer to complete assignments.
- Establish expectations for correct spelling on assignments.
- Extra textbooks for home.
- Student may request books on tape / CD / digital media, as available and appropriate.
- Assign a peer helper in the class setting
- Provide oral reminders and check student work during independent work time
- Assist student with long and short term planning of assignments
- Encourage student to proofread assignments and tests
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- Teachers will check/sign student agenda daily

- Student requires use of other assistive technology device

Modifications for Homework and Assignments

- Extended time to complete assignments.
- Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases.
- Provide the student with clearly stated (written) expectations and grading criteria for assignments.
- Implement RAFT activities as they pertain to the types / modes of communication (role, audience, format, topic).

Modifications for Assessments

- Extended time on classroom tests and quizzes.
- Student may take/complete tests in an alternate setting as needed.
- Restate, reread, and clarify directions/questions
- Distribute study guide for classroom tests.
- Establish procedures for accommodations / modifications for assessments.