Kenilworth Public Schools

Curriculum Guide

Content Area: Math
Grade: Kindergarten
BOE Approved: 8/13/2012

Revision Date: January 2019
Submitted by: Stacey Miller
BOE Revision Approved: 1/14/19

Mathematics- Grade K Scope and Sequence

Setting the Stage	Unit 1- Numbers 0-10	Unit 2- Addition and Subtraction	Unit 3- Numbers 11-20 and Beyond	Unit 4- Geometry and Positions	Unit 5- Measurement	Unit 6- Data
Weeks 1-6	Weeks 7-15	Weeks 16-20	Weeks 21-26	Weeks 27-31	Weeks 31-33	Weeks 33-35
Unit Description: Children will build background for successful learning in kindergarten.	*Unit Description*: Represent, count and write numbers from 0-10.	*Unit Description:* Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.	*Unit Description:* Counting and cardinality number and operations in base ten.	*Unit Description:* Identify and describe two- and three-dimensional shapes.	*Unit Description:* Describe and compare measurable attributes.	*Unit Description:* Classify objects and count the number of objects in each category.
Unit Targets • Know number names and the counting sequence. • Count to tell the number of objects. • Compare numbers.	*Unit Targets:* • Understand number names and the count sequence. • Count to tell the number of objects. • Compare numbers. • Introduce ordinal numbers.	*Unit Targets:* • Represent addition and subtraction with objects, drawings, acting out situations, or equations. • Solve addition and subtraction word problems. • Decompose numbers less than or equal to 10 into pairs. • For any number from 1-9, find the number	*Unit Targets:* • Work with numbers 11-19 to gain foundations for place value. • Understand number names and the count sequence. • Count to tell the number of objects. • Compare numbers.	*Unit Targets:* • Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres). • Analyze, compare, create, and compose shapes. • Define positional words.	*Unit Targets:* • Describe measurable attributes of objects, such as length or weight. • Compare two objects with a measurable attribute in common.	*Unit Targets:* • Classify objects into given categories: count the numbers of objects in each category and sort the categories by count. • Read pictographs.

		that makes 10 when added to a given number. • Fluently add and subtract within 5.				

Mathematics- Grade Kindergarten- Setting the Stage

Unit title: Setting the Stage for Kindergarten Learning

Unit summary: Children will build background for successful learning in Kindergarten.

Primary interdisciplinary connections: Language Arts

21st Century Themes: Global Awareness

Learning Targets

NJSLS Standards: K.CC.A.1, 2&2

Technology Standards: K.2.8.2.2.B.1

Content Statements:

1	Know number names and the count sequence
2	Count to tell the number of objects
3	Compare numbers

Big Idea: Counting and Cardinality – Understanding Numbers

Unit Essential Questions:	**Unit Enduring Understandings:**
• What are numbers? • How do we form the numbers? • What are numbers useful for?	• Students will learn to recognize and write numbers to 10 • Understand the relationship between numbers and quantities; connect counting to cardinality • Students will be able to form the numbers 1-10

Unit Learning Targets

Students will…

Understand the relationship between numbers and quantities; connect counting to cardinality.

- 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.
- 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.
- Understand that each successive number name refers to a quantity that is one larger.
- 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.

Evidence of Learning

Summative Assessment:

Teacher observations Math journals Running math records Pretest for Chapter 1
Formative Assessments: • Teacher observation • Mid-Chapter checkpoints • Show What You Know- Lesson Review • Unit Projects

Lesson Plans	
Activities	*Timeframe*
• Math basic skills pages* to help foster number sense. • Create an Interactive Notebook* with activities to build number sense. (see Teacher resources) *Ongoing Activities: • Basic skills work • Interactive notebooks The following Mathematical Practices are to be included in math activities: 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. **Students with Disabilities, English Language Learners, and Gifted & Talented Students:** Differentiating instruction is a flexible process that includes the planning and design of instruction, how that instruction is delivered, and how student progress is measured. Teachers recognize that students can learn in multiple ways. By providing appropriately challenging learning, teachers can maximize success for all students. Examples of Strategies and Practices that Support Students with Disabilities:	Weeks 1-6

• Use of visual and multisensory formats • Use of assisted technology • Use of prompts • Modification of content and student products • Testing accommodations • Authentic assessments Examples of Strategies and Practices that Support Gifted & Talented Students: • Adjusting the pace of lessons • Curriculum compacting • Inquiry-based instruction • Independent study • Higher-order thinking skills • Interest-based content • Student-driven instruction • Real-world problems and scenarios Examples of Strategies and Practices that Support English Language Learners: • Pre-teaching of vocabulary and concepts • Visual learning, including graphic organizers • Use of cognates to increase comprehension • Teacher modeling • Pairing students with beginning English language skills with students who have more advanced English language skills •Scaffolding •Word walls •Sentence frames •Think-pair-share •Cooperative learning groups •Teacher think-aloud	
Teacher Resources	*Teacher Note*
• https://www.teacherspayteachers.com/Product/Kindergarten-RTI-Number-Sense-0-20-426009 • https://www.teacherspayteachers.com/Product/Kindergarten-Interactive-Math-Notebook-August-and-September-1325318 • https://www.teacherspayteachers.com/Product/Go-Math-Kindergarten-Interactive-Math-Notebook-Interactive-Math-Fun-1378587 • HMH Mega Math • Animated Math Models • Manipulative Kits • Centers • Abcya.com	*Basic skills worksheets and Interactive Notebook pages can be found in the Kindergarten Supplemental Activities binder.

Mathematics- Grade Kindergarten Unit One

Unit title: Numbers 0-10

Unit summary: Children will understand number names and the count sequence. Students will count to tell the number of objects and compare numbers.

Primary interdisciplinary connections: Science, Social Studies, and Language Arts.

21st Century Themes: Global Awareness

Learning Targets

Learning Standards: K.CC.2, K.CC.3, K.CC.4, K.CC.5, K.CC.6, K.CC.7, K.OA.3, K.OA.4

Content Statements:

1	Numbers 0-10
2	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
3	Understand the relationship between numbers and quantities; connect counting to cardinality

Big Idea: Reading, writing and counting numbers is an important base of mathematics.

Unit Essential Questions:

- How can you show, count, and write numbers 0 to 5?
- How can building and comparing sets help you compare numbers?
- How can you show, count, and write numbers 6 to 9?
- How can you show and compare numbers to 10?

Unit Enduring Understandings:

- Children will understand the relationship between numbers and quantities.

Unit Learning Targets

Students will…

- Model, count, and represent numbers 0-10 with objects, number names and written numerals.
- Understand that each successive number refers to a quantity that is one larger.
- Solve problems by using different strategies: make a model or draw a picture.
- Compare two numbers between 1 and 10.
- Use matching and counting strategies to compare sets of objects as equal to, less than, or greater than.

Evidence of Learning

Summative Assessment: Chapters 1, 2, 3, 4 Review/Tests

Performance Tasks:

- Ch. 1: Assess numbers 0-5
- Ch. 2: Assess counting strategies
- Ch. 3: Assess numbers 6-9
- Ch. 4: Assess counting strategies up to 10

Formative Assessments:

- Teacher observation
- Mid-Chapter checkpoints
- Show What You Know- Lesson Review
- Unit Projects

Lesson Plans

Activities	*Timeframe*
• Grab and Go Centers as noted in Teacher's manual • Work in pairs, each student has a number path 1 – 10, number cubes, spinner or die and counters. o Students take turns rolling the number cubes/spinning spinner or die and then counts out that many counters and places it on their number path to show they are correct. The student then crosses out that number on their number path. The game ends when both partners have all numerals crossed out on their number path. Do not use a number line. • Create a Number Wall where students display sets of pictures from magazines, drawings, sticker, etc. that are equal in number (e.g. magazine pictures of 6 apples) arrange pictures so that they are in groups that can be subitized. Each week change the "Number of the Week. • Read GoMath! About the Math pg. 73A and pg.77A to help develop the concept of less prepare 2 jars and have students predict which jar has "less" than the other jar. Use this to develop the concept as well as the vocabulary for students to be able to explain their thinking. • Do Explore pg. 69. Use the "Listen and Draw" problem in the left margin without the workbook page. You can change the names in the story to those of your students. Students work in cooperative groups with 5-frames and manipulatives Use the EL Strategy to model the language. • Complete Elaborate and Evaluate pg. 71. In the left-hand margin see Think Smarter and Go Deeper and Essential Question. • "Show What You Know" for each topic within chapters 1-4.	Weeks 7-15

• Project: My Number Story Teacher's Manual 8B • Math Story- Beginning of each unit • Calendar math Kit Daily • Cross Curricular Center Activity- Five Colors teacher's Manual 9F • Cross- Curricular Center Activity- Stack Up Teacher's Manual 129F *Ongoing Activities: • Basic skills work • Interactive notebooks The following Mathematical Practices are to be included in math activities: 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. **Students with Disabilities, English Language Learners, and Gifted & Talented Students:** Differentiating instruction is a flexible process that includes the planning and design of instruction, how that instruction is delivered, and how student progress is measured. Teachers recognize that students can learn in multiple ways. By providing appropriately challenging learning, teachers can maximize success for all students. Examples of Strategies and Practices that Support Students with Disabilities: • Use of visual and multisensory formats • Use of assisted technology • Use of prompts • Modification of content and student products • Testing accommodations • Authentic assessments Examples of Strategies and Practices that Support Gifted & Talented Students: • Adjusting the pace of lessons • Curriculum compacting • Inquiry-based instruction	

• Independent study • Higher-order thinking skills • Interest-based content • Student-driven instruction • Real-world problems and scenarios Examples of Strategies and Practices that Support English Language Learners: • Pre-teaching of vocabulary and concepts • Visual learning, including graphic organizers • Use of cognates to increase comprehension • Teacher modeling • Pairing students with beginning English language skills with students who have more advanced English language skills • Scaffolding •Word walls •Sentence frames •Think-pair-share •Cooperative learning groups •Teacher think-aloud	
Teacher Resources	*Teacher Note*
• Teacher Manual • Assessment Guide • iTools • HMH Mega Math • Grab and Go Centers • Manipulative Kits • Animated Math Models	*Basic skills worksheets and Interactive Notebook pages can be found in the Kindergarten Supplemental Activities binder.

Mathematics- Grade Kindergarten Unit Two

Unit title: Addition and Subtraction

Unit summary: Children will understand addition as putting together and adding to and subtraction as taking apart and taking from.

Primary interdisciplinary connections: Language Arts, Technology and Art

21st Century Themes: Global Awareness

Learning Targets

NJSLS Standards: K.OA.1, K.OA.2, K.OA.4, K.OA.5

Technology Standards: K.2.8.2.2.B.1

Content Statements:

1	Addition and subtraction within 10
2	Know number names and the count sequence
3	Count to tell the number of objects
4	Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from

Big Idea: Addition and subtraction are ways to put numbers together and take away.

Unit Essential Questions:

- How can you show addition as putting together two numbers?
- How can you show subtraction as taking away from a larger number?
- How can you use objects and drawings to solve addition and subtraction problems within 10?

Unit Enduring Understandings:

- There are many ways to add and subtract.
- Words problems are a story with a math problem that needs to be solved.

Unit Learning Targets

Students will…

- Count each object giving only one number name and stop the count sequence to tell how many are in the group.
- Compare the quantity of 2 or more sets.
- Match number symbols and write numbers to represent quantities and create sets to match numbers.
- Make sense of size or quantity using 5- and 10-frames and number paths.
- Represent addition and subtraction with objects, fingers, drawings, verbal explanations and equations.

- Solve addition and subtraction word problems.
- Fluently add and subtract within 5.

Evidence of Learning

Summative Assessment: Chapters Review/ Tests

Performance Task:

- Ch. 5: Assess the understanding of addition
- Ch. 6: Assess the understanding of subtraction

Formative Assessments:

- Go Math! Assessment Options:

Show What You Know Diagnostic Assessment;
Mid-Chapter Checkpoint;
Quick Checks;
Portfolio Assessment;
Chapter 5/6 Review/Test; Chapter 5/6 Test;
Diagnostic Interview Assessment;
Soar to Success;
Standards Practice Pages.

Lesson Plans	
Activities	*Timeframe*
• Grab and Go Centers as noted in Teacher's Manual • "Show What You Know" for each topic within chapters 5 and 6. • Math Story- beginning of each chapter. • Calendar Math Kit daily • Cross Curricular Center Activity-Ten Birds On A Fence Teacher's Manual 165F • Cross Curricular Center Activity- Build and Take Away Teacher's manual 221F *Ongoing Activities: • Basic skills work • Interactive notebooks The following Mathematical Practices are to be included in math activities: 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. **Students with Disabilities, English Language Learners, and Gifted & Talented Students:** Differentiating instruction is a flexible process that includes the planning and design of instruction, how that instruction is delivered, and how student progress is measured. Teachers recognize that students can learn in multiple ways. By providing appropriately challenging learning, teachers can maximize success for all students. Examples of Strategies and Practices that Support Students with Disabilities: • Use of visual and multisensory formats • Use of assisted technology • Use of prompts	Weeks 15-20

• Modification of content and student products • Testing accommodations • Authentic assessments Examples of Strategies and Practices that Support Gifted & Talented Students: • Adjusting the pace of lessons • Curriculum compacting • Inquiry-based instruction • Independent study • Higher-order thinking skills • Interest-based content • Student-driven instruction • Real-world problems and scenarios Examples of Strategies and Practices that Support English Language Learners: • Pre-teaching of vocabulary and concepts • Visual learning, including graphic organizers • Use of cognates to increase comprehension • Teacher modeling • Pairing students with beginning English language skills with students who have more advanced English language skills • Scaffolding •Word walls •Sentence frames •Think-pair-share •Cooperative learning groups •Teacher think-aloud	
Teacher Resources	*Teacher Note*
• Teacher Manual • Assessment Guide • iTools • HMH Mega Math • Grab and Go Centers • Manipulative Kits • Animated Math Models	*Basic skills worksheets and Interactive Notebook pages can be found in the Kindergarten Supplemental Activities binder.

Mathematics- Grade Kindergarten Unit Three

Unit title: Numbers 11-20 and Beyond

Unit summary: Children will represent, count and write numbers 11 to 20 and beyond.

Primary interdisciplinary connections: Technology, Language Arts, and Social Studies

21st Century Themes: Global Awareness

Learning Targets

NJSLS Standards: K.CC.1, K.CC.2, K.CC.3, K.CC.5, K.CC.6, K.NBT.1

Technology Standards: K.2.8.2.2.B.1

Content Statements:

1	Know number names and count sequence
2	Count to tell the number of objects
3	Compare numbers
4	Work with numbers 11-19 to gain foundations for place value

Big Idea: Basic number concepts are necessary for more difficult math skills.

Unit Essential Questions:

- How can you use objects to show numbers from 11-20 and beyond as tens and ones?
- How can you solve a problem by drawing a picture or making a model?
- How can knowing number sequence help you count past 20?
- How can you use groups of tens to help you count?

Unit Enduring Understandings:

- Numbers and quantities are directly related.
- There is an order that always has to be followed when counting to 100 by ones.
- The use of tens and ones is important when putting together and taking apart numbers.
- Counting and matching can be used to compare numbers.

Unit Learning Targets

Students will…

- Count to 100 by ones and by tens.
- Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
- 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).
- Understand the relationship between numbers and quantities; 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.

- 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.
- Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.
- Compare two numbers between 1 and 10 presented as written numerals.
- Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

Evidence of Learning

Summative Assessment: Chapter Review/Tests

Performance Tasks:

- Ch. 7: Assess numbers 11 to 19 using objects, diagrams, words and numerals.
- Ch. 8: Assess the understanding of numbers 20 and beyond.

Formative Assessments:

- Mid-Chapter checkpoints
- Teacher observation
- Show What You Know- Lesson Review

Lesson Plans

Activities	*Timeframe*
• Participating in number talks • Working with 10's frames • Working with 100's charts • Grab and Go Centers as noted in Teacher's Manual • "Show What You Know" for each topic within chapters 7 and 8. • Math Story- Beginning of each chapter. • Calendar math Kit daily • Cross Curricular Center Activity- Build To Nineteen Teacher's Manual 257F • Cross Curricular Center Activity- Let's make Flags Teacher's manual 305F *Ongoing Activities:	Weeks 20-26

• Basic skills work • Interactive notebooks The following Mathematical Practices are to be included in math activities: 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. **Students with Disabilities, English Language Learners, and Gifted & Talented Students:** Differentiating instruction is a flexible process that includes the planning and design of instruction, how that instruction is delivered, and how student progress is measured. Teachers recognize that students can learn in multiple ways. By providing appropriately challenging learning, teachers can maximize success for all students. Examples of Strategies and Practices that Support Students with Disabilities: • Use of visual and multisensory formats • Use of assisted technology • Use of prompts • Modification of content and student products • Testing accommodations • Authentic assessments Examples of Strategies and Practices that Support Gifted & Talented Students: • Adjusting the pace of lessons • Curriculum compacting • Inquiry-based instruction • Independent study • Higher-order thinking skills • Interest-based content • Student-driven instruction • Real-world problems and scenarios Examples of Strategies and Practices that Support English Language Learners: • Pre-teaching of vocabulary and concepts	

• Visual learning, including graphic organizers • Use of cognates to increase comprehension • Teacher modeling • Pairing students with beginning English language skills with students who have more advanced English language skills • Scaffolding •word walls •sentence frames •think-pair-share •cooperative learning groups •teacher think-aloud	
Teacher Resources	*Teacher Note*
• Teacher Manual • Assessment Guide • iTools • HMH Mega math • Grab and Go Centers • Manipulative Kits • Animated math Models	*Basic skills worksheets and Interactive Notebook pages can be found in the Kindergarten Supplemental Activities binder.

Mathematics- Grade Kindergarten Unit Four

Unit title: Geometry and Positions

Unit summary: Children will identify and describe shapes. Children will describe objects using positional terms.

Primary interdisciplinary connections: Language Arts, Technology, and Social Studies

21st Century Themes: Global Awareness

Learning Targets

NJSLS Standards: K.G.A.1, K.G.A.2, K.A.G.3, K.G.B.4, K.G.B.6

Technology Standards: K.2.8.2.2.B.1

Content Statements:

1	Identify and describe shapes
2	Analyze, compare, create, and compose shapes

Big Idea: Geometry is studying shapes and their positions in space.

Unit Essential Questions:	**Unit Enduring Understandings:**
• How can you identify, name and describe two-dimensional shapes? • How can identifying and describing shapes help you sort them? • How can you use positional words to describe shapes in the environment?	• Shapes can be both 2 dimensional and 3 dimensional. • Geometry is used to build and draw different shapes. • Shapes can be different sizes and have different attributes.

Unit Learning Targets

Students will…

- Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).
- 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.
- Correctly name shapes regardless of their orientations or overall size.
- Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).
- Analyze, compare, create, and compose shapes.
- 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).
- Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
- Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”

Evidence of Learning

Summative Assessment: Chapter Review/Tests

Performance Tasks:

- Ch. 9: Assess the understanding of two-dimensional shapes.
- Ch. 10: Identify three-dimensional shapes and their attributes.

Formative Assessments:

- Mid-Chapter checkpoints
- Teacher observation
- "Show What You Know"- Lesson Review
- Unit Project

Lesson Plans

Activities	*Timeframe*
• Work with pattern blocks to demonstrate Objects in the environment can be described by shape names. Shapes have attributes by which they can be described, sorted and classified regardless of their orientation. Shapes can be composed from other shapes. • For many students this may be their first experience working with foam shapes, geometric solids, pattern blocks, etc. Before students are asked to use these as math tools, it is necessary for them to have had opportunities to explore and "get the play out" before using them for instruction. Therefore, consider having these manipulatives in tubs/baskets during math workshop and/or choice time in the weeks prior to this unit. • Use Shapes for Freight Train sets; small and large circles, squares, triangles, rectangles, and hexagons. • Students use manipulatives to count sides/vertices on 2 dimensional shapes and use solid geometric shapes to count the number of vertices and faces on solids. Pencil and paper work should occur at the end as a way for students to record their work. • Have students discover how 2 dimensional shapes create 3 dimensional shapes by when discussing the characteristic of solids. • Allow students to explore different types of triangles in different	Weeks 27-31

orientations to justify why it is a triangle. Discuss how the number sides/vertices remain the same regardless of orientation. Also discuss how "color" does not define a shape. Continue to have students work in cooperative groups as they hold the shapes to count sides/vertices/faces etc.

- Use the solid shapes and foam attribute shapes from the GoMath! Manipulative kit. • Organize the students into partner pairs. Giving one partner a bag of 2- dimensional shapes and the other partner a bag of 3-dimensional shapes. Partners work together to match the 2- dimensional shapes to the face of the solid shapes. • Students further discover how the face of the solids determine whether or not a solid shape stacks or rolls. • Discuss curved and flat surfaces and relate it back to curved and straight lines on 2- dimensional shapes. • Performance Task Ch. 10 "Shape Safari" pgs. AG135 – 139
- Project: My Math Storybook- Alike and Different Teacher's Manual 352B
- Grab and Go Centers as noted in Teacher's Manual
- "Show What You Know" for each topic within chapters 9 and 10.
- Math Story-Beginning of each unit.
- Calendar math Kit daily
- Cross Curricular Center Activity- Picture This Teacher's Manual 353F
- Cross Curricular Center Activity- Shape Walk Teacher's Manual 409F

*Ongoing Activities:

- Basic skills work
- Interactive notebooks

The following Mathematical Practices are to be included in math activities:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
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Students with Disabilities, English Language Learners, and Gifted & Talented Students:

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Teacher Resources	*Teacher Note*
• Teacher Manual • Assessment Guide • iTools • HMH Mega math • Grab and Go Centers • Manipulative Kits	*Basic skills worksheets and Interactive Notebook pages can be found in the Kindergarten Supplemental

• Animated math Models	Activities binder.

Mathematics- Grade Kindergarten Unit Five

Unit title: Measurement

Unit summary: Children will identify and compare measurable attributes.

Primary interdisciplinary connections: Language Arts, Technology,

21st Century Themes: Global Awareness

Learning Targets

NJSLS Standards: K.MD.A.1, K.MD.A.2, K.MD.B.3

Technology Standards: K.2.8.2.2.B.1

Content Statements:

1	Describe and compare measurable attributes.
2	Classify objects and count the number of objects in the categories.

Big Idea: Measurement is necessary for describing and comparing objects by their attributes.

Unit Essential Questions:	**Unit Enduring Understandings:**
• How can comparing objects help you measure them?	• Measurement is useful for finding the height, length, and weight of an object.

Unit Learning Targets

Students will…

- Describe and compare measurable attributes.
- Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.
- Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.
- Classify objects and count the number of objects in each category.
- Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Evidence of Learning

Summative Assessment: Chapter Review/Tests

Performance Tasks:

- Ch.11: Assess the understanding of using comparisons to measure length, height, and weight.

Formative Assessments:

- Mid-Chapter checkpoints
- Teacher observation
- “Show What You Know”- Lesson Review
- Unit Project

Lesson Plans	
Activities	*Timeframe*
• Project: How Tall Am I? My Math Storybook Teacher's Manual 460B • Grab and Go Centers as noted in Teacher's Manual • "Show What You Know" for each topic within chapter 11. • Math Story- Beginning of each unit. • Calendar Math Kit Daily • Cross Curricular Center Activity-Sort By Height Teacher's Manual 461D • Cross Curricular Center Activity- How Tall Am I? Teacher's Manual 461 • Students use a variety of objects to sort and organize by length. *Ongoing Activities: • Basic skills work • Interactive notebooks The following Mathematical Practices are to be included in math activities: 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. **Students with Disabilities, English Language Learners, and Gifted & Talented Students:** Differentiating instruction is a flexible process that includes the planning and design of instruction, how that instruction is delivered, and how student progress is measured. Teachers recognize that students can learn in multiple ways. By providing appropriately challenging learning, teachers can maximize success for all students. Examples of Strategies and Practices that Support Students with Disabilities: • Use of visual and multisensory formats • Use of assisted technology • Use of prompts • Modification of content and student products • Testing accommodations • Authentic assessments	Weeks 31-33

Examples of Strategies and Practices that Support Gifted & Talented Students: • Adjusting the pace of lessons • Curriculum compacting • Inquiry-based instruction • Independent study • Higher-order thinking skills • Interest-based content • Student-driven instruction • Real-world problems and scenarios Examples of Strategies and Practices that Support English Language Learners: • Pre-teaching of vocabulary and concepts • Visual learning, including graphic organizers • Use of cognates to increase comprehension • Teacher modeling • Pairing students with beginning English language skills with students who have more advanced English language skills • Scaffolding •Word walls •Sentence frames •Think-pair-share •Cooperative learning groups •Teacher think-aloud	
Teacher Resources	*Teacher Note*
• Teacher Manual • Assessment Guide • iTools • HMH Mega math • Grab and Go Centers • Manipulative Kits • Animated math Models	*Basic skills worksheets and Interactive Notebook pages can be found in the Kindergarten Supplemental Activities binder.

Mathematics- Grade Kindergarten Unit Six

Unit title: Classify and Sort Data

Unit summary: Children will classify and sort data based on attributes.

Primary interdisciplinary connections: Technology, Language Arts

21st Century Themes: Global Awareness

Learning Targets

NJSLS Standards: K.OA.1, K.OA.2, K.OA.5**,** K.MD.3

Technology Standards: K.2.8.2.2.B.1

Content Statements:

1	Classify objects and count the number of objects in categories
2	Making and reading a graph

Big Idea: Classification and graphs are useful tools in collecting and organizing data.

Unit Essential Questions:	**Unit Enduring Understandings:**
• How does sorting help you display information? • How can you make and read a graph to show the data collected?	• Graphs are a visual representation of data. • Sorting and classifying objects can help determine similarities and differences.

Unit Learning Targets

Students will…

- Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.
- Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.
- Make and read a graph to count objects that have been classified into categories.

Evidence of Learning

Summative Assessment: Chapter Review/Tests

Performance Tasks:

- Ch. 12: Assess the understanding of sorting, classifying, and graphing

Formative Assessments:

- Mid-Chapter checkpoints
- Teacher observation
- "Show What You Know"- Lesson Review
  Unit Project

Lesson Plans	
Activities	*Timeframe*
• Grab and Go Centers as noted in Teacher's Manual • "Show What You Know" for each topic within chapter 12. • Math Story- Beginning of each unit. • Calendar Math Kit Daily *Ongoing Activities: • Basic skills work • Interactive notebooks The following Mathematical Practices are to be included in math activities: 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. **Students with Disabilities, English Language Learners, and Gifted & Talented Students:** Differentiating instruction is a flexible process that includes the planning and design of instruction, how that instruction is delivered, and how student progress is measured. Teachers recognize that students can learn in multiple ways. By providing appropriately challenging learning, teachers can maximize success for all students. Examples of Strategies and Practices that Support Students with Disabilities: • Use of visual and multisensory formats • Use of assisted technology • Use of prompts • Modification of content and student products	Weeks 33-35

• Testing accommodations • Authentic assessments Examples of Strategies and Practices that Support Gifted & Talented Students: • Adjusting the pace of lessons • Curriculum compacting • Inquiry-based instruction • Independent study • Higher-order thinking skills • Interest-based content • Student-driven instruction • Real-world problems and scenarios Examples of Strategies and Practices that Support English Language Learners: • Pre-teaching of vocabulary and concepts • Visual learning, including graphic organizers • Use of cognates to increase comprehension • Teacher modeling • Pairing students with beginning English language skills with students who have more advanced English language skills • Scaffolding •Word walls •Sentence frames •Think-pair-share •Cooperative learning groups •Teacher think-aloud	
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