

Glen Ridge Public Schools – Mathematics Curriculum



Course Title: Kindergarten Math

Subject: Mathematics

Grade Level: Kindergarten

Duration: 36 weeks

Prerequisite: None

Elective or Required: Required

Mathematics Mission Statement

Mathematics is an integral part of our lives. Students must be actively involved in their mathematical education with problem solving being an essential part of the curriculum. The mathematics curricula should emphasize thinking skills through a balance of computation, intuition, common sense, logic, analysis and technology. Students will be engaged and challenged in a student-centered learning environment that is developmentally appropriate. Students will communicate mathematical ideas effectively by applying hands-on manipulatives, basic computational skills, mathematical models and technology in order to solve practical problems.

Course Description:

The kindergarten math program emphasizes the use of concrete materials to develop the understanding of mathematical concepts. The children are activity involved with a wide variety of materials to explore patterning, sorting and classifying, graphing, counting, measurement, geometry, addition and subtraction, place value and problem solving.

Author: Lisa Petruzzi

Date Submitted: Summer 2017

Kindergarten Mathematics

Unit: 1

Approximate: 4 weeks

Essential Questions:

- How do we establish daily mathematical routines?
- How do we tell which object is longer (comparing lengths)?
- How to count a set of objects to 5?
- What are Pattern Blocks and how are they used?
- How do we sort objects?
- What are attributes?
- How do we recognize numbers in our world?
- How do we collect data?
- How do we recognize and describe shapes?

Upon completion of this unit students will be able to:

- Participate in daily mathematical routines ((K.CC.1,2,3 K.CC.4a,b, K.CC.5,K.CC.6,,7K.MD.3,K.OA.2,))
- Explore measurement by comparing lengths (K.MD.1, K.DM.2)
- Identify and describe shapes (K.G.2, K.G.3, K.G.4)
 - a. Use informal language to describe shapes
 - b. Explore shapes in different orientations
 - c. Combine simple shapes to form other shapes and pictures
 - d. Describe the relative position of shapes
 - e. Verbally count objects in a set of 5
 - f. Recognize numbers out of sequence in a set of 5
 - g. Use a five frame to compare numbers in various ways
 - h. Count objects in each sorted category
- Recognize that numbers have many different uses (K.CC.3)
- Explore the number 0 and 1 (K.CC.3,K.CC.4a,c,K.CC.5)
 - a. Recognize and understand 0 as a number for “none”
 - b. Represent numbers with concrete objects
- Develop oral counting skills by learning how to “count on” (K.CC.1,2)
- Count, compare and represent data (K.MD.3, K.CC4.a, K.CC.4b, K.CC.4c, K.CC.5,6,7)
 - a. Make a class bar graph
 - b. Use understanding of one-to-one correspondence and cardinality to count and create sets of object
 - c. Represent numbers in various ways
 - d. Compare the number of objects in each category
 - e. Recognize that the number of objects in a set is the same regardless of the arrangement or type of object
- Compose and decompose numbers and explore addition by looking at dots in different arrangements (K.OA.3)
- Create and extend patterns (K.G.2)
 - a. Create and extend color patterns

Interdisciplinary Standards (njcccs.org)

- **Standard 8.1 – Computer and Information Literacy:** All students will use computer applications to gather and organize information and to solve problems
- **Standard 8.2 - Technology Education:** All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world as they relate to the individual, society, and the environment
- **Standard 6.3 - Active Citizenship in the 21st Century:** All students will acquire the skills needed to be active, informed citizens who value diversity and promote cultural understanding by working collaboratively to address the challenges that are inherent in living in an interconnected world.

- **Standard 9.1 - 21st-Century Life and Career Skills:** All the students will demonstrate the creative, critical thinking, collaboration, and problem solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.

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Activities – include 21st Century Technologies:

Morning Meeting:

- Create a days in school Growing Number Line
- Create an Attendance Chart where children will write numbers, collect data and solve problems as daily attendance is recorded.
- Create a Daily Schedule and monthly calendar
- Create a weather and temperature chart for collecting and recording data related to the daily weather
- Create a daily survey/ Morning Message for each day
- Sing and clap to counting, color ,shape and number songs to reinforce the skills and concepts (counting, days of the week, months of the year, weather) being taught at Morning Meeting
- Count by rote in group and individually
- Calendar Activities
- Smart Board activities

Read Alouds

1. The Quilt By: Ann Jones
2. Selina and the Bear Paw Quilt By: Barbara Smucker
3. Changes, Changes By: Pat Hutchins
4. City by Numbers By: Stephen T Johnson
5. Emily’s First 100 Days of School By: Rosemary Wells
6. When I was Five By: Arthur Howard
7. Five Little Chicks By: Nancy Tafuri
8. Five Little Firefighters By: Margret Wise Brown
9. Five Little Monkeys By: Eileen Christelow
10. Seven Blind Mice By: Ed Young

Songs/Chants

1. Everyday Math Sing Everyday Song Collection
2. Dr. Jean Totally Math cd
3. Raffi - 5 green and Speckled frogs

Everyday Math Activities:

Play the game Partner Match (K.MD.2)

1. Compare body heights to objects
2. Math Masters pg 10-11 Family letter
3. Activity Card 1/ Matching Lengths

Exploring Pattern Blocks (K.G.2,4,6)

1. Read The Quilt or Selina and the Bear Paw Quilt
2. Describe and identify pattern block shapes
3. Free exploration with Pattern Blocks and Everyday Math Mats
4. Play I Have Who Has with shape attributes “I have a green triangle, who has an orange square”?
5. Activity Card 2/ Exploring Pattern Blocks

Count to tell number of objects (K.CC4a-b, K.CC.5)

1. Read City by Numbers
2. Use 1-1 correspondence when count a set of 5
3. Introduce and play the Gotcha Game
4. Use a 5’s frame to count a set
5. **Math Masters pg 12 Home Links Activity**

Number Walk (K.CC.3)

1. Take a Number Walk to look for numbers used in different ways around the school
2. Create a number poster

3. Math Masters pg 14 Home Links Activity

Getting to Know Numbers (K.Cc.3,4a-c,K.CC.5)

1. Read Emily's First 100 Days of School
2. Create number collections for 1
3. Activity Card 3/ Number Posters

Play Count and Sit (K.Cc.1,2)

1. Sing a counting song (Sing Everyday/ Connected ED)

Class Birthdays (K.CC.4a-b,K.CC.5,6,K.MD.3)

1. Make a class birthday chart (Math Masters pgs 15-17)
2. Create a birthday months graph

3. Math Masters pg 17 Home Links Activity

Make a class age graph (K.CC.4a-b,K.CC.5,6,K.MD.3)

1. make a self portrait for graph
2. add self portrait to graph
3. compare age of children in class

Create number stations to represent numbers 1-5 (K.CC.4a-b,K.CC.5., KOA.3,5)

1. Read/sing 5 Little Monkeys
2. Make collections bags for #'s 1-5
3. Activity Card 4/ Number Stations

4. Math Masters pg 19 Home Links Activity

Introduction to "Quick Looks" (ConnectED.mheducation.com) quick images for smartboard

1. Use Smart Board/Document camera to display the "Quick Look" cards

Five Frames (K.CC.4a-b, K.CC5, K.OA.3,5)

1. Exploring a 5's Frame with counters (Math Masters TA4)
2. Practice making combinations of 5 with colored counters (ex 2 red and 3 yellow = 5)
3. Activity Card 5

Describing Shapes (K.G.4)

1. Shape Card Charades
2. Sort objects by different attributes
3. Combine and create shapes using shape cards
4. Make shape picture and puzzles
5. Make a class list of descriptive words for shapes (straight, curvy, pointed, zig zag)
6. Math Masters TT6-T10
7. Activity Card 6/Sorting Shapes

Patterning With Shapes (K.G1,2)

1. Create Growing and Repeating patterns
1. Create and extend color patterns
2. Create and extend shape patterns
- 3. Math Masters pg 20 Home Links Activity**
4. Activity Cards 7-8

Enrichment Activities:

- Open Response Questions
- Readiness, Enrichment and Extra Practice Activities
- Activity Cards
- Math Seeds
- Everyday Math Online Games/EToolkit
- Everyday Math Partner Games
- Home Link Activities
- Extra Practice Activities
- Minute Math Activities
- Math Masters worksheets and activities
- Online web sites and games (i.e. scholastic, Math Seeds,Everyday Mathematics Program Math games)

Methods of Assessments/Evaluation:

- Everyday Math Beginning of the Year Assessment
- Individual kindergarten assessment
- Student Growth Objective Assessment
- Unit/Chapter assessments
- Everyday Math Individual Profile of Progress Recording Sheet
- Class Checklists
- Class Recording Sheets
- Entrance/Exit Slips
- Teacher/Student chosen Portfolio work
- Rubrics
- SMART board lessons
- Math Seeds
- Thumbs up/Thumbs down
- Pair/share
- Center activities
- Teacher Observations
- Hands on activities/manipulatives
- Anecdotal Notes
- Classroom work
- Teacher created assessments
- Circle Time Discussions

Resources:

- Everyday Mathematics Program: Teacher's Guide To Activities
- Everyday Mathematics Program: Math Masters
- Everyday Mathematics Program: Resources for Kindergarten Classroom
- Everyday Mathematics Program: Assessment Handbook
- Everyday Mathematics Program: Home School connection Handbook
- Everyday Mathematics Program: Minute Math Activity Book
- Everyday Mathematics Program: My First Math Book
- Everyday Mathematics Program: CD/Software of Everyday Math Games
- Everyday Mathematics Program: Center Activity Cards

Everyday Mathematics Program : Sing Everyday music CD

Online Resources:

- connectED.mcgraw-hill.com
 1. Digital teacher lesson guides
 2. eToolkit
 3. Assessments and recording records
 4. eBook activities
 5. differentiated learning activities
 6. Everyday Math at home digital access activities
 7. Everyday Math games
 8. Everyday Math Home Connection handbook
- www.mathseeds.com
- Teacher Webpage
- You Tube
- Youcubed weekly newsletter and interactive activities www.youcubed.org

Kindergarten Mathematics
Unit: 2
Approximate 4 Weeks

Essential Questions:

- What happen when we combine groups and what happens when we take groups apart?
- What is addition?
- What is subtraction?
 - How many sides does a triangle have?
 - What are the different sides of a triangle called?
 - What does a one more pattern look like?
 - What are collection boxes and how do we sort objects?
 - Do circles have straight or rounded lines?
 - What is a tens frame?
 - What is a scattered arrangement
 - Are squares and rectangles the same?
 - What is a number story?

Upon completion of this unit students will be able to:

- Represent addition and subtraction with objects, mental images, drawings, sounds, acting out situations, verbal explanations, expressions or equations. (K.OA.1)
- Solve addition and subtraction word problems, and add and subtract within 10. (K.OA.2)
- Classify objects into given categories, count the number of objects in each category and sort the categories by count. (K.MD.3)
- Correctly name shapes (triangles, circles, rectangles, squares) regardless of their orientation or size. (K.G.2)
- Analyze and compare two and three dimensional shapes, in different sizes and orientations using informal language. (K.G.4)

Interdisciplinary Standards (njcccs.org)

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Activities – include 21st Century Technologies:

Calendar/Smartboard Activities

Read Alouds

1. Ten Black Dots By: Donald Crews
2. The Greedy Triangle By: Marilyn Burns
3. Rooster is off to See the World By: Eric Carle
4. A Pocket for Corduroy By: Don Freedman
5. Round is a Mooncake By: Roseanne Thong
6. Ten Little Fish By: Audrey Wood
7. Splash By: Ann Jonas
8. Circus Shapes By: Stuart J Murphy

Songs/Chants

1. Everyday Math Sing Everyday music cd
2. Dr. Jean Totally Math cd

Everyday Math Activities:

Match sets of dots in different arrangements (K.CC.4a-c,K.CC5,6)

1. **Math Masters pg 21 Family Letter**
2. Read Ten Black Dots
3. Play Match Up with dot cards
4. Activity Cards 9

Count and compare quantities of dots in sets (K.CC.4a-c,K.CC5,6)

1. Domino Top It game (Math Masters G2-G3)
2. Activity card 10

Getting to Know Triangles (K.G.1,2,4)

1. Read The Greedy Triangle
2. Create a triangle collage

3. **Math Masters pg 22 Home Links Activity**

Make a Number Board (K.CC.3,K.CC.4a-c, K.CC.5)

1. Read Rooster is off to See the World
2. Build a class number board with objects that will equal 10
3. Math Masters pg 23, children will make their own number boards with stamps or stickers

Pocket Problems, play count and sit (K.OA.1, 2; K.CC.1,2)

1. Read A Pocket for Corduroy
2. Solve "Pocket Problems"
3. Activity Card 11

4. **Math Masters pg 24 Home Links activity**

How Many Now Game (K.CC.2,K.CC.a-c, K.CC.5)

1. Sing "One More" math songs (Sing Everyday math cd)
2. Play Find the Next Number Game
3. Activity Card 12/ How Many Now Game

Introduction to sorting/**Open Response** (K.MD.1,3; K.G.2, 4)

1. Sort and classify objects in different ways
 - a. prepare 11'x17' sorting mats for each student
 - b. prepare objects to be sorted for each table
2. Compare, analyze and discuss a variety of sorted collections they created
 - a. Use Reengagement Planning form for assessment
 - b. Activity Card 13

- c. **Math Masters pg 25 Home Links Activity**

Getting to Know circles (K.G.1,2,4)

1. Read Round is a Mooncake
2. Create a circle collage
3. My First Math Book Journaling page - Making circles

4. **Math Masters pg 26 Home Links Activity**

Introduction to tens frames - compose and decompose numbers in various ways on a tens frame (K.CC.4a,b; K.CC.5, K.OA.3,4)

1. Tens Frames, counters and number cards (Math Masters pg TA12)
2. Sing Ten in a Bed, each time moving a counter off the tens frame
3. Activity Card 14

Counting Collections - Counting collections of objects in different arrangements (K.CC.4a,b;K.CC.5,6; K.MD.3)

Read 10 Little Fish

1. Blue Pond cut outs and counters - children will practice counting objects in scattered arrangements (can use goldfish for this activity too just cannot eat them).
2. Create a painting of 10 or less scattered fish in a pond

3. Activity Card 14/ Counting Fish

Getting to Know Rectangles (K.G.1,2,4)

1. Create a floor rectangle with masking tape
2. Use Shape Cards to compare different rectangles by finding what is the same about all of them
3. Create a rectangle collage
4. My First Math Book Journal pg - children will practice drawing rectangles

5. **Math Masters pg 27 Home Links Activity**

Introduction to Number Stories - Create and solve different types of number stories (K.Oa1,2)

1. Read Splash -_Model the number stories used in the book
2. Tell and act out number stories
3. Activity Card 16/Making Number Stories
4. **Math Masters pg 29 Home Links Activity**

Enrichment Activities:

- Open Response Questions
- Readiness, Enrichment and Extra Practice Activities
- Activity Cards
- Math Seeds
- Everyday Math Online Games
- Everyday Math Partner Games
- Home Link Activities
- Extra Practice Activities
- Minute Math Activities
- Math Masters worksheets and activities
- Online web sites and games (i.e. scholastic, Math Seeds, Everyday Mathematics Program Math games)

Methods of Assessments/Evaluation:

- Everyday Math Individual Profile of Progress Recording Sheet
- Everyday Math Assessment check-ins
- Chapter/Unit assessments
- Daily Activities/Routines
- Readiness, Enrichment and Extra Activities
- Class Checklists
- Class Recording Sheets
- Entrance/Exit Slips
- Teacher/Student chosen Portfolio work
- Math Journals
- Open Response Activities
- Rubrics
- Teacher Observations
- Hands on activities/manipulatives
- Anecdotal Notes
- Classroom work
- Teacher created assessments
- Circle Time Discussions
- Whiteboard informal assessments
- Online games (i.e. scholastic, Math Seeds, Everyday Mathematics Program Math games)
- Math center activities
- Home Link activities

Resources:

- Everyday Mathematics Program: Teacher's Guide To Activities

- Everyday Mathematics Program: Math Masters
- Everyday Mathematics Program: Resources for Kindergarten Classroom
- Everyday Mathematics Program: Assessment Handbook
- Everyday Mathematics Program: Home School connection Handbook
- Everyday Mathematics Program: Minute Math Activity Book
- Everyday Mathematics Program: My First Math Book
- Everyday Mathematics Program: CD/Software of Everyday Math Games
- Everyday Mathematics Program: Center Activity Cards
- Everyday Mathematics Program : Sing Everyday music CD

Online Resources:

- connectED.mcgraw-hill.com
 1. Digital teacher lesson guides
 2. eToolkit
 3. Assessments and recording records
 4. eBook activities
 5. differentiated learning activities
 6. Everyday Math at home digital access activities
 7. Everyday Math games
 8. Everyday Math Home Connection handbook
- www.mathseeds.com
- Teacher Webpage
- You Tube
- Youcubed weekly newsletter and interactive activities www.youcubed.org

Kindergarten Mathematics
Unit: 3
Approximate 4 Weeks

Essential Questions:

- How can you compare and graph pattern blocks
- How do we write numbers to 10?
- How do we count numbers to 10?
- How can we compare numbers to 10?
- What does the last number in a counting sequence tell you?
- How can we compare different lengths?
- How to use positional words? (in front of, behind, up, down, etc...)

Upon completion of this unit students will be able to:

- Sort, graph, compare and count pattern blocks by shape (K.CC.5,5;K.MD.3)
- Use a tens frame to explore number pairs that add to 10 (K.CC.4b; K.OA.3,4)
- Practice writing numerals 1-10 (K.CC.3,5)
 1. Match objects to dots to written numerals ((K.CC.3)
 2. Recognize numerals and represent number with objects (K.CC.4a, K.CC.4b, K.CC4.c)
- Compare and order numbers (K.CC.7)
- Compare lengths and arrange items by length (K.MD.1, K.MD.2)
- Understand the use of positional language ((K.G.1)
- Create matching representations for numbers between 5-10 (K.CC3, 4b, 5, 6)
 1. Become aware of equivalent names for numbers
 2. Discuss and analyze different representations of numbers
- Practice numeral recognition, 1-1 correspondence and counting as they play a game (K.CC.3,4a)

- Use number cards to practice successive numbers, sequencing, number recognition and matching sets of numbers ((K.CC.2,3,4a-c,5)
- Match dice patterns to numerals (K.CC.3,4b,5,6)
 1. Learn and play the game Roll and Record
 2. Practice number writing skills
- Play a game to practice number recognition and explore number relationships (greater than/less than) (K.CC.3,7)
 1. Learn and play the game Monster Squeeze

Interdisciplinary Standards (njcccs.org)

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Activities – include 21st Century Technologies:

Calendar/Smartboard Activities

Read alouds

1. Roll Over, A Counting Song By: Merle Peek
2. When A Line Bends....A Shape Begins By: Rhonda Gowler Greene
3. Circus Shapes By: Stuart J Murphy
4. Where's my Teddy? By: Jez Alborough
5. Is a Blue Whale the Biggest Whale there is? By: Robert E. Wells
6. The Three Billy Goats Gruff By: Paul Galdone
7. Rosie's Walk By: Pat Hutchins
8. Goldilocks and the Three Bears By: Robert Southey
9. Go Away Big Green Monster By: Ed Emberley

Songs and chants

1. Everyday Math Sing Everyday music cd
2. Roll Over
3. Math Is Fun
4. Chant and Write
5. I know an Old Lady
6. Five Little Monkeys
7. Spy a Shape

Activities:

Graphing Pattern Blocks (K.CC5,6;K.MD.3)

1. Sort pattern blocks by shape and color
2. Organize and record pattern blocks on graphing grid (Math Masters pg 31)
3. Activity Card 17/ Sorting and Graphing Collections

Finding Combinations of Ten (K.CC.4b,K.OA.1,K.OA.3,K.OA.4)

1. Play Ten Bean spill / Activity Card 18
2. **Math Masters pg 33 Home Links Activity**

Play Count and Sit (Duck duck Goose)

1. Sing Roll Over, a counting song

Two Dimensional Shape Exploration (K.G1,4,5)

1. Read aloud When a Line Bends, A Shape Begins or Circus Shapes

2. Make Rope Shapes
3. Body Shapes
4. Make Shape Posters
5. Activity Card 19/ Shapes on Geoboards

Number Books (K.CC.3)

1. Sing Chant and Write by Dr. Jean
2. Sing The Numeral Song (Sing Everyday/Everyday math)
3. Practice writing numbers 1 and 2
4. Activity Card 20/ Modeling Dough Numbers
5. Tactile number writing - Use shaving cream, salt, or sand to write numbers on trays

Sort Objects by longer or shorter (K.MD.1,2)

1. Read Where is My Teddy and/or Is a Blue Whale the Biggest Thing There Is?
2. Sort objects by longer or shorter
3. Activity Card 22

4. Math Masters pg 48 Home Links Activity

Obstacle Course Positions Course (K.G.1)

1. Sing Kitty Cat Position Song
2. Read Rosie's Walk, 3 Billy Goats Gruff, Goldilocks and the Three Bears

Create representation cards for numbers 5-10/ **Open Response Activity (K.CC.3,4b,5,6)**

1. Students will find 4 different ways to represent a number between 5-10
 - a. Math Masters pg 50 Representation recording sheet
2. Compare, analyze and discuss a variety of children's number representations
 - a. Use Reengagement Planning form for assessment
 - b. Activity Card 23

Spin a Number (K.Cc.3,K.CC.4a)

1. Introduce and play Spin A Number - Activity Card 24
2. Prepare spinners - Math Masters G11-G12
3. Practice number writing 0-10
- 4. Math Masters pg 51 Home Links Activity**

Make a Human Number Line (K.CC.2,3,K.CC4a-c,K.CC.5)

1. Sing Number March by Dr. Jean
2. Children will be assigned a number and have to sequence themselves in order from 0-10
3. Activity Card 25/ Beat the Timer
- 4. Math Masters pg 52 Home Links Activity**

Number Card and Dice Games (K.CC.2,3,K.CC4a-c,K.CC.5)

1. Top It
2. Go Fish
3. Matching
4. Roll and Record
5. Monster Squeeze
6. Activity Cards 26-28
- 7. Math Masters pgs 53-54 Home Links Activities**

Number Writing on Slates (K.CC.2,3,K.CC4b-c,K.CC.5)

1. Sing Chant and Write by Dr. Jean
2. Number writing on slates
3. Tactile number writing activities
4. Activity Card 29/ Dice and Spinner Numbers

Enrichment Activities:

- Open Response Questions
- Readiness, Enrichment and Extra Practice Activities
- Activity Cards
- Math Seeds

- Everyday Math Online Games/eToolkit
- Everyday Math Partner Games
- Home Link Activities
- Extra Practice Activities
- Minute Math Activities
- Math Masters worksheets and activities
- Online web sites and games (i.e. scholastic, Math Seeds, Everyday Mathematics Program Math games)

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- Hands on activities/manipulatives
- Anecdotal Notes
- Classroom work
- Teacher created assessments
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- Everyday Mathematics Program: Assessment Handbook
- Everyday Mathematics Program: Home School connection Handbook
- Everyday Mathematics Program: Minute Math Activity Book
- Everyday Mathematics Program: My First Math Book
- Everyday Mathematics Program: CD/Software of Everyday Math Games
- Everyday Mathematics Program: Center Activity Cards

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 3. Assessments and recording records
 4. eBook activities
 5. differentiated learning activities
 6. Everyday Math at home digital access activities
 7. Everyday Math games
 8. Everyday Math Home Connection handbook

- www.mathseeds.com
- Teacher Webpage
- You Tube
- Youcubed weekly newsletter and interactive activities www.youcubed.org

Kindergarten Mathematics
Unit: 4
Approximate 4 Weeks

Essential Questions:

- What are attribute blocks and do we use them?
- How can objects be represented and compared using geometric attributes?
- How can objects be classified?
- What is counting and how do we use it?
- How to use the sense of touch to describe shapes?
- How to analyze results from a graph?
- What is a Pan balance scale and how is it used?
- What is a calculator and how is it used?
- What are “teen numbers”?

Upon completion of this unit students will be able to:

- Sort and classify attribute blocks (K.CC.5,6; K.MD.1,3; K.G.2,4,5,6)
- Create and analyze a graph (K.cc.5,6; K.MD.3)
- Use a calculator to read and record numbers (K.CC.3,5)
- Compose and decompose numbers up to 10 on a tens frame (K.OA.3,4,5)
- Count and recognize teen numbers (K.CC.1,3)
- Build hexagons with other smaller shaped pattern blocks (K.G.1,2,6)
- Use connecting cubes to compose and decompose numbers in multiple ways (K.CC.1.3.6,7;K.G.1,2,6)
- Use a pan balance to compare the weight of different objects (K.MD.1,2)
- Understand capacity and compare capacities (K.MD.1,2)
- Learn to skip count by 10’s (K.CC.1,2)
- Play games to practice comparing written numerals (K.CC.3,7)

Interdisciplinary Standards (njcccs.org)

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Activities – include 21st Century Technologies:

Calendar/Smartboard Activities

Read alouds

1. Three Little Firefighters By: Stuart J Murphy
2. Frog and Toad (The Button Story) By: Arnold Lobel

3. Caps For Sale By: Esphyr Slobodkina
4. Mojo Means One By: Muriel Feelings
5. Meet the Teens By: Marcia Cooper
6. We All Went on Safari By: Laurie Krebs
7. The Apple Pie Tree By: Zoe Hall
8. Cook-a-Doodle Do By: Susan Stevens Crummel
9. One Hundred is a Family By: Pam Muñoz Ryan
10. More or Less By: Stuart J Murphy
11. How the Stars Fell in the Sky By: Jerrie Oughton

Songs and chants

1. Everyday Math Sing Everyday music cd
2. Spy a Shape - Totally Math by Dr. Jean
3. Shape a Loo - Totally Math by Dr. Jean
4. Skip Counting - Totally Math by Dr. Jean

Everyday Math Activities:

Explore Attribute Blocks (K.CC.5,6; K.MD.1,3;K.G.2)

1. Sort and Classify Attribute Blocks
2. Activity Card 30/ Attribute Collage

3. Math Masters pgs 55-56 Family Letter and Home Links Activity

Identify and describe attributes by shape and texture (K.G.2,4)

1. Make shape collages with sponge paint
2. Activity Card 31/ Matching Shapes by Feel

Create a Graph to analyze the results (K.CC.5,6; K.MD.3)

1. Create a "Favorite Color" bar graph with class
2. Create a graph with connecting cubes

Explore the calculator as a math tool (K.CC.3,4)

1. Pass out calculators and allow student to explore the tool
2. Use the calculator in the etoolkit to model important features on the calculator (on/off button, clear button etc..)
3. Practice searching for numbers on the calculator
4. Activity Card 32/ Quick Looks on Calculators

Tens Frame Quick Looks (K.OA.3,4,5)

1. Use etoolkit to display the tens frame quick look cards
2. Students will use tens frames to record what they saw
3. Play Tens frame match up

4. Math Masters pg 59 Home Links Activity

Recognition of Teen Number 10-19 (K.CC.1,3)

1. Read Meet the Teens
2. Identify teens numbers on the Growing Number Line
3. Simon Says with teen Numbers
4. Teen Number Activity Cards (Do 12 jumping Jacks, 15, squats etc..)

Building Hexagons/Open Response Activity(K.G1,2,6)

1. Use Math Masters pg 62-63 Pattern-Block work mats for each pair of students
2. Students will work in pairs to build hexagons with pattern blocks
3. Students will record their new hexagon shapes on Math MASTers work mat 62
4. Compare, analyze and discuss a variety of children's hexagon representations
 - a. Use Reengagement Planning form for assessment
 - b. Activity Card 33

Building Numbers (K.CC3,5,6;K.OA.3)

1. Use connecting cubes to compose and decompose numbers
2. Math Masters pgs 64-68

Exploring Weights (K.MD1,2)

1. Introduce the Pan balance
 - a. Compare the weights of different objects by using a pan balance

2. Activity Cards 34-35

3. Math Masters pg 69 Home Links Activity

Exploring Capacity (K.MD.1,2)

1. Read Cook-A-Doodle-Do Or The Apple Pie Tree

2. Introduce capacity and compare the capacities of different containers

3. Activity Cards 36-37

4. Math Masters pg 70 Home Links Activity

Practice skip counting by 10's (K.CC1,2)

1. Read 100 is a Family

2. Sing Macarena Math

3. Practice on-to-one counting and skip counting by 10's

4. Math Masters pg 71 Home Links Activity

Comparing Written Numerals (K.Cc.3,7)

1. Play Top-It with Number Cards Activity Card 38

2. Math Masters pg 73 Home Links Activity

Number Grid Exploration (K.CC.1,2,3)

1. Explore the Number Grid and use it as a counting tool

a. building a number Grid

b. Number Grid Cover Up

c. Counting on a Number Grid

Enrichment Activities:

- Open Response Questions
- Readiness, Enrichment and Extra Practice Activities
- Activity Cards
- Math Seeds
- Everyday Math Online Games/EToolkit
- Everyday Math Partner Games
- Home Link Activities
- Extra Practice Activities
- Minute Math Activities
- Math Masters worksheets and activities
- Online web sites and games (i.e. scholastic, Math Seeds, Everyday Mathematics Program Math games)

Methods of Assessments/Evaluation:

- Everyday Math Individual Profile of Progress Recording Sheet
- Everyday Math Assessment check-ins
- Chapter/Unit assessments
- Daily Activities/Routines
- Readiness, Enrichment and Extra Activities
- Class Checklists
- Class Recording Sheets
- Entrance/Exit Slips
- Teacher/Student chosen Portfolio work
- Math Journals
- Open Response Activities
- Rubrics
- Teacher Observations
- Hands on activities/manipulatives
- Anecdotal Notes
- Classroom work
- Teacher created assessments
- Circle Time Discussions

- Whiteboard informal assessments
- Online games (i.e. scholastic, Math Seeds, Everyday Mathematics Program Math games)
- Math center activities
- Home Link activities

Resources:

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- Everyday Mathematics Program: Home School connection Handbook
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- Everyday Mathematics Program: My First Math Book
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Online Resources:

connectED.mcgraw-hill.com

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 3. Assessments and recording records
 4. eBook activities
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 6. Everyday Math at home digital access activities
 7. Everyday Math games
 8. Everyday Math Home Connection handbook
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 - Teacher Webpage
 - You Tube
 - Youcubed weekly newsletter and interactive activities www.youcubed.org

Kindergarten Mathematics
Unit: 5
Approximate 4 Weeks

Essential Questions:

- What does 100 look like?
- Why are graphs helpful?
- How many combinations of 10 can be made?
- How many shapes can you find in pictures?
- How can you make a teen number?
- How to use a double tens frame?
- What do the = and + symbol mean?
- What are Number Scrolls and how are they related to math?
- How can shapes be combined to make new shapes?

Upon completion of this unit students will be able to:

- Read and write numbers from 0-20 and represent at least 10 objects with a numeral (K.CC.3)

- Solve simple number stories and problems involving addition and subtraction, using objects, drawing or other strategies. (K.OA.2)
- To find the number that makes 10 when added to a given number, using a tens frame for support. (K.OA.4)
- To compose and decompose numbers from 11-19 into tens and ones and some more. (K.NBT.1)
- Use a double tens frame (K.NBT.1)
- Describe objects in the environment using names of 2 dimensional shapes (K.G.1)
- Understand and use the names for positional words (K.G.1)
- To model familiar shapes by drawing (K.G.1)

Interdisciplinary Standards (njcccs.org)

- **Standard 8.1 – Computer and Information Literacy:** All students will use computer applications to gather and organize information and to solve problems
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- **Standard 6.3 - Active Citizenship in the 21st Century:** All students will acquire the skills needed to be active, informed citizens who value diversity and promote cultural understanding by working collaboratively to address the challenges that are inherent in living in an interconnected world.
- **Standard 9.1 - 21st-Century Life and Career Skills:** All the students will demonstrate the creative, critical thinking, collaboration, and problem solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.

Activities – include 21st Century Technologies:

Calendar/Smartboard activities

Read Alouds

1. 100th Day Worries By: Margery Cuyler
2. The 100th Day of School By: Angela Shelf Medearis
3. The Night Before the 100th Day of School By: Natasha Wing
4. Mouse Count By: Ellen Stoll Walsh
5. Bunny Party By: Rosemary Wells
6. Equal Shmequal By: Virginia Kroll
7. Little Quack By: Lauren Thompson
8. Shape by Shape By: Suse MacDonald
9. Grandfather Tang's Story By: Ann Tompert
10. Mouse Shapes By: Ellen Stoll Walsh

Songs/Chants/Poems

1. Everyday Math Sing Everyday music cd
2. Number Count
3. I wish I had 100
4. 100 Days
5. 100th Day of School, count to 100 (You Tube)
6. Songs for the 100th Day (Songs4teachers)
7. The Shape Song (You Tube)
8. The Counting Song (You Tube)
9. Totally Math (Dr. Jean)

Everyday Math Activities:

100th Day Of School (K.CC.1.5,K.MD.1,2)

1. 100th Day of School Read Alouds
2. 100th Day of School counting activities
 - a. Counting combinations of ten
 - b. Filling in a number grid
 - c. 100th day art projects

3. Math Masters pgs 76-77 Home Links Activities

Analyze the Sums of Dice Rolls (K.CC.3,5;K.OA.2,3)

1. Play Roll and Record with Dot Dice
2. My First Math Book pg 1
3. Roll and Record Predictions (Math Masters G20)
4. Activity Card 39/ Roll and Record game

Generating Combinations of 10 (K.CC.5,K.OA.1,3,4)

1. Prepare boards and materials for Ten Bears on a Bus Game (Math Masters TA 12,19, 34,35; 20 Bear Counters for each pair 10 of each color)
2. Introduce the game Ten Bears on a Bus
3. Students will work in pairs of two to play the game
4. Activity Card 40/ Ten Bears on A Bus

Find and Draw Shapes (K.G.1,2,4,5)

1. Sing Shape Songs
2. Read Mouse Count
3. Collaborate with the art teacher for a combined lesson with the artist Paul Klee
4. Make Shape collages
5. Go on a Shape Walk around the School

6. Math Masters pg 79 Home Links Activity

Teen Partners (K.CC.3,5)

1. Representing teen numbers with fingers (My First math Book pg 3)
2. Recognizing a teen number as a group of 10 and “some more”
3. Activity Card 41/ Making Tens and Ones

Seats at a Party - **Open Response**

1. Children solve a comparison numbers story (day 1)
 - a. Math Masters pg 81
2. Compare, analyze and discuss a variety of children’s drawing representations (day 2)
 - a. Use Reengagement Planning form for assessment (Math Masters pg TA11)

Teens on a Double tens frame (K.CC.3,5,6,7)

1. Introduce the double tens frame (Math Masters TA50)
2. Show the numbers 10-20 using a double tens frame and counters
3. Play Spin a Teen Number with the tens frame mats
4. Activity Card 42?Teens on a Double Tens Frame

5. Math Masters pg 82 Home Links Activity

Introduce the = symbol (K.CC.5,6, K.OA.3)

1. Read Aloud Equal Shmequal
2. Use counters to create equal and unequal groups

Play Top-It with number cards 0-20 (K.CC.3,7)

1. My First Math Book pg 4

Introduce the addition symbol (K.OA.1,2)

1. Introduce the + symbol as something that is used to represent “more”
2. Use number stories and counters to introduce the + symbol
3. Activity Card 43/ Telling “Adding” Number Stories
4. Write Number Models for Number Stories

5. Math Masters pg 83 Home Links Activity

Growing Train Game (K.CC.2,5,K.OA.1,2)

1. Prepare Boards and materials for The Growing Train Game for each student
2. Introduce the Growing Train Game
3. Play The Growing Train Game with a partner
4. Activity Cards 44-45 Racing Trains and Growing Trains

Number Scrolls (K.CC.1,2,3)

- Introduce and make Number Scrolls (Math Masters TA 52)
- Activity Card 46/ Number Schools beyond 100

Shape Combinations (K.G.1,2,4,6)

1. Read Aloud Mouse Shapes, Shape by Shape and/or Grandfather Tang's Story
1. Use Pattern Blocks, attribute blocks and/or shape cards to combine and create new shape
2. Make Pattern Block Puzzles (Math Masters TA 39-48)
3. Activity Card 47-48/ Shape Card Puzzles

Enrichment Activities:

- Open Response Questions
- Readiness, Enrichment and Extra Practice Activities
- Activity Cards
- Math Seeds
- Everyday Math Online Games/EToolkit
- Everyday Math Partner Games
- Home Link Activities
- Extra Practice Activities
- Minute Math Activities
- Math Masters worksheets and activities

Methods of Assessments/Evaluation:

- Everyday Math Individual Profile of Progress Recording Sheet
- Everyday Math Assessment check-ins
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- Rubrics
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- Hands on activities/manipulatives
- Anecdotal Notes
- Classroom work
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- Circle Time Discussions
- Whiteboard informal assessments
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Resources:

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- Everyday Mathematics Program: Math Masters
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- Everyday Mathematics Program: Assessment Handbook
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- Everyday Mathematics Program: Minute Math Activity Book
- Everyday Mathematics Program: My First Math Book
- Everyday Mathematics Program: CD/Software of Everyday Math Games

- Everyday Mathematics Program: Center Activity Cards

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 6. Everyday Math at home digital access activities
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 - Teacher Webpage
 - You Tube
 - Youcubed weekly newsletter and interactive activities www.youcubed.org

Kindergarten Mathematics

Unit: 6

Approximate 4 Weeks

Essential Questions:

- How do you compare heights and lengths?
- How do you interpret a bar graph?
- How do you describe a 3 dimensional shape?
- How are shapes the same and different?
- How can use use attributes to sort objects?
- What is the - symbol and how is it used?
- How can a number be broken down into smaller numbers?
- How can the +, -, and = symbols be used in number stories

Upon completion of this unit students will be able to:

- Read and write numbers from at least 0-20 and represent sets with numerals (K.CC.3)
- Represent addition and subtraction concretely and verbally (K.OA.1)
- Compare objects by length and by weight and describe the difference using terms such as lighter, heavier, shorter and longer (K.MD.2)
- Classify objects into given categories, count the number of objects in each category, and sort the categories by count (K.MD.3)
- Correctly name a variety of 2 dimensional shapes and some three dimensional shapes regardless of their orientation or overall size (K.G.2)

Interdisciplinary Standards (njcccs.org)

- **Standard 8.1 – Computer and Information Literacy:** All students will use computer applications to gather and organize information and to solve problems
- **Standard 8.2 - Technology Education:** All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world as they relate to the individual, society, and the environment

- **Standard 6.3 - Active Citizenship in the 21st Century:** All students will acquire the skills needed to be active, informed citizens who value diversity and promote cultural understanding by working collaboratively to address the challenges that are inherent in living in an interconnected world.
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Activities – include 21st Century Technologies:

Calendar/Smartboard activities

Read Alouds

1. Tall By: Jez Alborough
2. Pet Show By:
3. Five Little Ducks By: Raffi
4. I Love Trains By: Philemon Sturges
5. This Train By: Paul Collicutt
6. Blueberries for Sal By: Robert McCloskey

Songs/Chants/Poems

1. Everyday Math Sing Everyday music cd
2. I Spy a Shape (Dr Jean)
3. Shape Song (You Tube)

Activities:

Comparing Body heights to objects (K.MD.1,2)

1. **Math Masters pg 85/ Family Letter**
2. Read Tall
3. Play I Spy with Shapes
4. Activity Card 22/ Sort Objects by longer or shorter

Length Line Up (K.MD.1,2)

1. Compare the order of mixed assorted objects by length from shortest to longest

Make a Favorite Pet Graph (K.CC.5,6,K.MD3)

1. Read Pet Show
2. Students will draw a picture of their favorite pet on a post it
3. Create a “Favorite Pet”
4. Record results on individual bar graphs (teacher must make)
5. Complete My First Math Book pg 7

Solid Shape Museum (K.G1-4)

1. Describe and compare flat and solid shapes
2. Observe and compare the difference between flat and solid shapes
3. Learn the names of the solid shapes
4. Introduce the term two-dimensional and three dimensional
5. Play “Guess My Shape”
6. Play “Stand Up If...”
7. Make 3-dimensional shapes with modeling clay and straws
8. Activity Card 49/Stamping with 3D Shapes
9. **Math Masters pg 89 Home Links Activity**

Sorting Rules (K.CC.5,6, K.MD.3)

1. Review and practice sorting objects by attribute (color, shape etc..)
2. Introduce and play What’s My Rule Fishing Game
3. Activity Card 50/ fishing for Attributes

Tall enough to Ride - **Open Response Activity**

1. Children solve a measuring number story (day 1)
2. Compare, analyze and discuss a variety of children’s height representations (day 2)
 - a. Use Reengagement Planning form for assessment (Math Masters pg TA11)
3. Activity Card 51/Measuring With Sticky Notes

Subtraction symbol (K.OA.1,2)

1. Read and Sing 5 Little Ducks
2. Introduce the Subtraction (-) Symbol as a way to show less
3. Share and solve subtraction number stories
4. Activity Card 52?Take Away Number Stories
5. **Math Masters pg 91 Home Links Activity**

Disappearing Train (K.CC.6,7,K.OA.1,2)

1. Prepare game boards and dice for Disappearing Train Game
2. Introduce and model the Game
3. Activity Cards 53-54

Analyze and Compare Different Attributes (K.MD.1,2.K.G.2,4)

1. Prepare attribute spinners for game (Math Masters G23-24)
2. Play the Attribute Spinner Game
3. Activity Cards 55-56/ Attributes

Combinations of 10 (K.CC.5,K.OA1,3,4)

1. Introduce and play Hiding Bears Game
 - a. My First Math Book pg 8
2. **Math Masters pg 93 Home Links Activity**
3. Activity Card 57

Relating Symbols to Number Stories (K.OA.1,2)

1. Read Blueberries for Sal
2. Tell a “join” or “take away” number story for children to solve
 - a. Children can use pictures, words and/or numbers and symbols to solve the number story
 - b. My First Math Book pg 10
3. Activity Card 59

Enrichment Activities:

- Open Response Questions
- Readiness, Enrichment and Extra Practice Activities
- Activity Cards
- Math Seeds
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- Extra Practice Activities
- Minute Math Activities
- Math Masters worksheets and activities

Methods of Assessments/Evaluation:

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Kindergarten Mathematics
Unit: 7
Approximate 4 Weeks

Essential Questions:

- How can a number line be used to help with addition and subtraction?
- How can I identify and count objects in a scattered and unscattered arrangement?
- How can I compare objects in two or more groups by using the terms greater than or less than?
- How can I solve addition and subtraction number stories within 10?
- How can I recognize and compare 2 dimensional and 3 dimensional shapes?
- How can I use a pan balance scale to compare weights?
- How can I use estimating skills to compare objects?
- How can data be collected and organized for display?
- Why do we break numbers apart into tens and ones?

Upon completion of this unit students will be able to:

- Count object in an array of 20 or a scattered arrangement of 10 (K.CC.5)
- Use counting and matching strategies to identify whether the objects in one group are greater than, less than or equal to the number of objects in another group. (K.CC.6)
- Solve addition and subtraction word problems and be able to add and subtract within 10 (K.OA.2)
- Decompose numbers less than 10 or equal to 10 into pairs in more than one way by using objects or drawings, and record each decomposition by a drawing or equation (K.OA.3)
- identify shapes as 2 dimensional or 3 dimensional (K.G.3)
- Compose simple shapes to form larger shapes (K.G.6)

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Activities – Include 21st Century Technologies:

Calendar/Smartboard activities

Read Alouds:

1. Dominoes Around the World By; Mary D. Lankford
2. Cubes, Cones, Cylinders and Spheres By: Tanya Hobin
3. Just a Little Bit By: Ann Tompert
4. The Best Vacation Ever By: Stuart J. Murphy
5. 12 Ways to Get 11 By: Eve Merriam
6. Animals on Board By: Stuart J. Murphy

Songs and Chants

1. Everyday Math Sing Everyday music cd
2. Dr. Jean Totally Math cd

Everyday Math Activities:

Number Line Addition and Subtraction (K.CC.2,K.OA.1,K.OA.2)

1. **Math Masters pg 94 - Family Letter**
2. Frog Hops on the Number Line activity
3. Activity Card 60/Frog Hops

Domino Addition (K.CC.3,K.OA.1,2,3,K.MD.3)

1. Decomposing dominoes
2. Arranging dominoes in numerical order
3. Find the total dots on a domino by adding the two sides together
4. Use a domino to make a number sentence (5 dots + 2 dots = 7 dots)
 - a. My First Math Book pg 11
5. Activity Cards 61-62 Domino Concentration and Domino Matching
6. **Math Masters pg 95 Home Links Activity**

Teen Collections (K.CC.3,5,6)

1. Use a double tens frame to count and compare teen collections
 - a. My First Math Book pg 12
1. Monster Squeeze Game with teen numbers
2. Activity Card 63/Teen Number Stacks

Comparing 2 dimensional representations of three dimensional objects (K.G.1-4)

1. Practice recognizing 3 dimensional objects in 2 dimensional photos (ex a photo of a globe is still a sphere)
2. Play Solid Shape Match up game
3. Activity Card 64

Counting with a calculator (K.CC.1,2)

1. Sing Macarena Math, Ten in a Bed or 5 Speckled Frogs
2. Free exploration of calculators
3. Use etoolkit to model and practice how to find the +, - and = symbols on a calculator
4. Practice skip counting on the calculator
5. Activity Card 65

Exploring and Comparing Weights (K.MD.1,2)

1. Read Just a Little Bit
2. Pan Balance Leveling with clay
 - a. My First Math Book pg 14 Children solve a measuring number story (day 1)
3. Ordering Objects by Weight
 - a. My First Math Book Journaling Page
4. Activity Card 66/ Balancing Objects with Clay

Creating Surveys - **Open Response Question**

3. Children will work with a partner to conduct a survey and record their results (day 1)
4. Compare, analyze and discuss a variety of children's data collected and how they recorded and were able to share their results (day 2)
 - a. Math Masters pg 97

Using an Estimation Jar (K.Cc.1,3,5,6,7)

1. Introduce the term "estimating" as "making a smart guess" about something
2. Make an Estimation Jar
 - a. Math Masters pg 98

Exploring Number Combinations (K.CC.5,K.OA.1,K.OA.3)

1. Making Bead bracelets to decompose numbers
 - a. My First Math Book pg15
- 2. Math Masters pg 99 Home Links Activity**
3. Activity Card 68?Bead Combinations

Creating a Number Story Class Book (K.OA.1,2)

1. Read 12 Ways to Get 11
2. Review how number stories can be recorded by using pictures, letters or symbols
3. Each student will make up their own + or - number story for a class book

Class Collections (K.CC.1,2,3,5)

1. Make a Class Collection Museum and record the data
 - a. My First Math Book pg 16
 - b. Count the collections by 5's and 10's
- 2. Math Masters pg 100 Home Links Activity**

Addition Facts to 5 (K.CC.7,K.OA.1,2,5)

1. Read Animals on Board
2. Introduce and play the Dice Addition Game
3. Play Number Grid Cover Up
4. Activity Card 69/

Using Attributes to Identify an Object (K.MD.1,3,K.G.2.4)

1. Mystery Block Game
2. Activity Card 70

Enrichment Activities:

- Open Response Questions
- Readiness, Enrichment and Extra Practice Activities
- Activity Cards
- Math Seeds

- Everyday Math Online Games/eToolkit
- Everyday Math Partner Games
- Home Link Activities
- Extra Practice Activities
- Minute Math Activities
- Math Masters worksheets and activities

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- www.mathseeds.com
- Teacher Webpage
- You Tube
- Youcubed weekly newsletter and interactive activities www.youcubed.org

Kindergarten Mathematics
Unit: 8
Approximate 4 Weeks

Essential Questions:

- How can your senses be used to identify shapes (K.G.1,2,4)
- How to count forward to 100 starting from numbers other than 1? (K.CC.1,2)
- How can counts be used to measure time? (K.CC.1,2)
- How to group and count objects by 10? (K.CC.3,5)
- How can patterns be used to find solutions? (K.OA.1,2,3,4; K.G.2)
- How to decompose the number 10 to find the missing part? ($10 = 6 + \underline{\quad}$) (K.OA.3,4)
- How can numbers be grouped from least to greatest (K.CC.2,3,7)
- What are some ways to gain fluency with addition facts? (K.CC.7, K.OA.1,2,5)
- How to solve number stories with calculators (K.OA.2)

Upon completion of this unit students will be able to:

- Identify, analyze and compare 2 and 3 dimensional shapes in different sizes and orientations
- Count to 100 by ones and tens
- Count forward to 100 starting from numbers other than 1
 - a. Use “counting on” strategies to add numbers from dice throws
- Apply addition and subtraction based function rules
 - a. Explore the difference between addition and subtraction rules
 - b. Develop fact fluency for addition facts to 10 and subtraction facts to 5
- Recognize numbers as combinations of 10s, and 1s
 - a. Count and group objects by 1’s and 10’s and record them with drawings or equations
- Practice decomposing numbers and finding a missing part of 10
 - a. Uses rules to determine missing numbers in a number pair
 - b. Solve missing number problems using concrete objects
- Compose, decompose and understand numbers 11-19 as ten and some more?
- Compare numbers and place them in order from least to greatest
- Use mental math strategies to add and subtract numbers
 - a. Learn and practice math games that will help with addition and subtraction fluency
- Explore equivalent names for numbers
 - a. Represent numbers with manipulatives, drawings, tallies, and numerical expressions
 - b. Generate equivalent names for numbers
 - c. Represent numbers with simple addition and subtraction number sentences
- Use calculators to model and solve number stories by forming addition and subtraction equations

Interdisciplinary Standards (njcccs.org)

- Standard 8.1 – Computer and Information Literacy: All students will use computer applications to gather and organize information and to solve problems
- Standard 8.2 - Technology Education: All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world as they relate to the individual, society, and the environment

- Standard 6.3 - Active Citizenship in the 21st Century: All students will acquire the skills needed to be active, informed citizens who value diversity and promote cultural understanding by working collaboratively to address the challenges that are inherent in living in an interconnected world.
- Standard 9.1 - 21st-Century Life and Career Skills: All the students will demonstrate the creative, critical thinking, collaboration, and problem solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.

Activities – Include 21st Century Technologies:

Calendar/Smartboard activities

Read Alouds

1. Castle, Cathedral, Pyramid (3 separate books by: David Macaulay)
2. This is the Way we Go to School By: Edith Baur
3. My Grandfather’s Clock By: Geraldine McCaughrean
4. The Tortoise and the Hare
5. What’s the Difference? An Endangered Animal Subtraction Story By: Suzanne Slade
6. More, Fewer and Less By; Tana Hoban
7. One is a Snail, Ten is a Crab By: April Pulley Sayre

Songs/Chants:

1. Everyday Math Sing Everyday music cd
2. Spy a Shape - Totally Math by Dr. Jean
3. Shape a Loo - Totally Math by Dr. Jean
4. Skip Counting - Totally Math by Dr. Jean
5. Macarena Math - Totally Math by: Dr. Jean

Everyday Math Activities:

Solid Shapes By Feel (K.G.1,2,4)

1. **Math Masters pg 101 Family Letter**
2. Read the Books Castle, Cathedral and Pyramid
3. Play I Spy a Shape
4. Sing I Spy a Shape
5. Activity Card 71 ? Feely Box - Use a Feely Box” to have children describe shapes by using their sense of touch

Model 3 Dimensional Shapes (K.G.2-6)

1. Make 3 dimensional shapes using straws toothpicks and marshmallows
2. Activity Card 72/Making Shapes

3. Math Masters pg 102 Home Links Assignment

Measuring and Comparing Time with Counts (K.CC.1,7,K.MD.2)

1. Discuss lengths of time using the words, longer and shorter
2. Read aloud, This is the Way We Go to School or My Grandfather’s Clock and discuss different ways people describe, measure, and mark the passage of time
3. Complete My First Math Book pg 18

Interrupted Counts (K.CC.1,2)

1. Practice counting on from numbers other than 1
 - a. Play Hiding Bears to practice counting on from numbers other than 1
 - b. use calculators to practice counting up from different numbers
 - c. Use a Number Grid to practice counting by 10’s

2. Math Masters pg 103 Home Links Activity

Subtraction Facts within 5 (K.CC7,K.OA.1,2,5)

1. Read Aloud; What’s the Difference? An Endangered Animal Subtraction Story
2. Introduce and play the game Dice Subtraction
3. Activity Card 73

Groups of Ten (K.CC.3,5)

1. Practice making Craft Stick Bundles to represent numbers greater than 10
 - a. My First Math Book pg 19

2. Activity Card 74/Craft Stick Numbers

Birds on a Wire - **Open Response Question**

1. Children will work in pairs to create ways to find number pairs that add to 10 (day 1)
2. Compare, analyze and discuss a variety of children's solutions and how they were able to share their results (day 2)
3. Activity Card 75/Birds on a Wire

Decomposing Numbers and finding the missing part of 10 (K.OA 3,4)

1. Prepare Car Race game boards, counters and dice for players (Math Masters G30)
2. Play The Car Race Game
3. Activity Card 76

Solve Number stories with calculators (K.OA.1,2)

1. Read Aloud; More, Fewer, Less
2. Practice solving number stories with large numbers with a calculator

Nonconsecutive Numbers (K.CC.2,3,7)

1. Compare numbers and place them in order from smallest to greatest
 - a. My First Math Book pgs 21-22
 - b. Monster Line Squeeze

2. Math Masters pg 106 Home Links Activity

Fluency with Addition (K.CC.7,K.OA.1,2,5)

1. Play Addition Top It
2. Dice Addition
3. Making 5

Introduce the Function Machine (K.Oa.1,2,5)

1. Introduce the "Function Machine" (make one out of a shoebox)
 - a. Show children how it "works" and allow student volunteers to "play" with it
 - b. Play "Beat the Function Machine" with class
2. Use the eToolkit to show the function machine on the smartboard
3. My First Math Book pg 24
4. Activity Card 78/ function Machines

Make Name Collection Posters (K.OA.1-3)

1. Read Aloud; One is a Snail, Ten is a Crab
2. Make Name Collection Posters for numbers 10-20
3. Activity Card 79/ Domino Name Collections
4. **Math Masters 107/ Home Links Activity**

Enrichment Activities:

- Everyday Math Individual Profile of Progress Recording Sheet
- Everyday Math Assessment check-ins
- Chapter/Unit assessments
- Daily Activities/Routines
- Readiness, Enrichment and Extra Activities
- Class Checklists
- Class Recording Sheets
- Entrance/Exit Slips
- Teacher/Student chosen Portfolio work
- Math Journals
- Open Response Activities
- Rubrics
- Teacher Observations
- Hands on activities/manipulatives
- Anecdotal Notes
- Classroom work
- Teacher created assessments

- Circle Time Discussions
- Whiteboard informal assessments
- Online games (i.e. scholastic, Math Seeds, Everyday Mathematics Program Math games)
- Math center activities
- Home Link activities

Methods of Assessments/Evaluation:

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Resources:

- Everyday Mathematics Program: Teacher's Guide To Activities
- Everyday Mathematics Program: Math Masters
- Everyday Mathematics Program: Resources for Kindergarten Classroom
- Everyday Mathematics Program: Assessment Handbook
- Everyday Mathematics Program: Home School connection Handbook
- Everyday Mathematics Program: Minute Math Activity Book
- Everyday Mathematics Program: My First Math Book
- Everyday Mathematics Program: CD/Software of Everyday Math Games
- Everyday Mathematics Program: Center Activity Cards

Online Resources:

connectED.mcgraw-hill.com

1. Digital teacher lesson guides
 2. eToolkit
 3. Assessments and recording records
 4. eBook activities
 5. differentiated learning activities
 6. Everyday Math at home digital access activities
 7. Everyday Math games
 9. Everyday Math Home Connection handbook
- www.mathseeds.com
 - Teacher Webpage

- You Tube
- Youcubed weekly newsletter and interactive activities www.youcubed.org

Kindergarten Mathematics
Unit 9
Approximate 4 Weeks

Essential Questions:

How can patterns be recreated?

How can we use addition and subtraction rules to help with fluency to 5?

How can we use measurable attributes (length, width) to describe objects?

How can we measure and compare weight?

How can we use concrete, verbal and symbolic representations for addition and subtraction ?

What tools can be used to measure time?

Upon Completion of this unit students will be able to:

- Recreate pattern block designs(K.G.1,2,6)
- Gain fluency with addition and subtraction to 5 (K.CC.7,K.OA.1,2,5)
- Describe measurable attributes of height and weight (K.CC.7, K.MD.1,2)
- Represent addition and subtraction concretely, verbally and symbolically (K.OA.1-5)
- Use a Pan balance scale to explore units of weight (K.CC.6,K.MD.1,2)
- use tools to measure and compare lengths of time (K.CC.7,K.MD.1,2)
- Introduced to double numbers on a tens frame (K.OA.1,2,5)
- Find combinations that add to 10 (K.OA.1-4)

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Everyday Math Activities - Including 21st Century Technology

Calendar/Smartboard activities

Read Alouds

Ten Little Fish

Everyday Math Activities:

Pattern Block Designs (K.G.1,2,6)

1. **Math Masters pg 108 - Family Letter**
2. Play “Make My Design
3. Activity Card 80
4. **Math Masters pg 109/ Home Links Activity**

Fluency with Subtraction (K.CC.7,K.OA.1,2,5)

1. Play Subtraction Top-It
2. Play Name that Number
3. Activity Cards 73 and 81

4. **Math Masters pg 110 Home Links Activity**

Identifying addition and subtraction Rules (K.OA.1,2,5)

1. Use the Function Machine to introduce “In and Out” rules
 - a. Use the In and Out Chart (eToolkit or Math Masters TA64)
2. “What’s My Rule” Problems

Measuring and Comparing (K.CC.7, K.MD.1-2)

1. Comparing height and width of selected objects
 - a. My First Math Book pgs 26-27
2. Activity Card 82/Measuring with Connecting Cubes

Weight and Capacity (K.CC.7, K.MD.1-2)

1. Comparing weight and capacity of selected objects
 - a. My First Math Book pgs 28-29

2. Math Masters pg 111 Home Links Activity

Adding Numerals (K.OA.1,2,3,5)

1. Play Roll and Record with numeral dice
 - a. Masters pgs G38-39 Roll and Record grid
 - b. Activity Card 83

Making Classroom Maps - **Open Response Activity**

1. Children will work in pairs to create a classroom map (day1)
2. Compare, analyze and discuss a variety of children’s maps and how they were able to present their maps to the class (day 2)
3. Activity Card 84/Making Maps

Explore Uniform weights on a Pan Balance (K.CC.6, K.MD.1,2)

1. Finding ways to make the pan balance scale level by finding uniform weights
 - a. My First Math Book pg 30
2. Comparing weight units (Math Masters pg 112)

Measuring Time (K.CC.7, K.MD.1,2)

1. Use a stopwatch to measure counts by the second
 - a. My First Math Book pg 31

2. Math Masters pg 113 Home Links Activity

“Double” Addition Facts (K.OA.1,2,5)

1. Use “Quick Look” cards to introduce doubles in addition
2. Roll and Record with “doubles” (Math Masters G20)
3. Doubling Dice roll (Math Masters TA 50)

Combinations of 10 (K.OA.1-4)

1. Read, Ten Little Fish
2. Prepare a “Fishing for Ten” deck of cards
3. Introduce and play the game
4. Activity Card 86/Fishing for Ten
5. Play Addition Flip it

Kindergarten Math Celebration (K.CC.1-3,5, K.OA.1-5, K.MD.1-2, K.G.1-3, K.G.5)

1. Read Aloud an appropriate end of the year Kindergarten book (The Night Before First Grade, Kindergarten Rocks etc...)
2. Sing together some of your favorite math-related songs from the year
3. Play some of your favorite math games that you learned throughout the year.

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- Home Link activities

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8. Digital teacher lesson guides

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10. Assessments and recording records
11. eBook activities
12. differentiated learning activities
13. Everyday Math at home digital access activities
14. Everyday Math games
10. Everyday Math Home Connection handbook
 - www.mathseeds.com
 - Teacher Webpage
 - You Tube
 - Youcubed weekly newsletter and interactive activities www.youcubed.org