Blind Brook
Grade 3
Math Standards Curriculum Alignment
June 2005

September – October

Number Sense and Statistics

Content Strands

3.N.16	Identify odd and even numbers
3.A.2	Describe and extend numeric patterns (+, -) *Note: numeric and geometric patterns are supplemented by the teacher.*
3.N.5	Use a variety of strategies to compose and decompose three-digit numbers
3.N.4	Understand the place value structure of the base ten number system: 10 ones = 1ten 10 tens = 1 hundred 10 hundreds = 1 thousand
3.N.2	Read and write whole numbers to 1,000
3.N.1	Skip count by 25's, 50's, 100's to 1,000
3.N.3	Compare and order numbers to 1,000
3.N.9	Understand and use the associative property of addition (Lesson 7.4, not in EM but must be covered here). *Note: the term "associative property of addition" will be actively used.*
3.S.3	Construct a frequency table to represent a collection of data (Social Studies)
3.S.4	Identify the parts of pictographs and bar graphs (Social Studies)
3.S.5	Display data in pictographs and bar graphs (Social Studies)
3.S.6	State the relationships between pictographs and bar graphs (Social Studies)
3.S.7	Read and interpret data in bar graphs and pictographs (Social Studies)
3.S.8	Formulate conclusions and make predictions from graphs (Social Studies) *Note: the above are done through map skills in social studies and do not appear in EM.*

Process Strands

3.CM.1	Understand and explain how to organize their thought process
3.CN.1	Recognize, understand, and make connections in their everyday experiences to mathematical ideas
3.R.1	Use verbal and written language, physical models, drawing charts, graphs, tables, symbols, and equations as representations
3.R.2	Share mental images of mathematical ideas and understandings
3.R.3	Recognize and use external mathematical representations
3.PS.1	Explore, examine, and make observations about a social problem or mathematical situation
3.PS.2	Understand that some ways of representing a problem are more helpful than others

3.PS.4	Act out or model with manipulatives activities involving mathematical content from literature
3.PS.5	Formulate problems and solutions from everyday situations
3.RP.1	Use representations to support mathematical ideas
3.PS.11	Make pictures/diagrams of problems
3.PS.12	Use physical objects to model problems

Vocabulary

Odd number	Whole number
Compare	Bar graph
Difference	Conclusion
Digits	Data
Doubling	Frequency table
Even number	Key to a graph
Expanded form	Pictograph
Hundred chart	Prediction
Hundred place	Survey
Mental math	Table
Number line	Graphical representations
Ones place	Interpret
Order/ verify results	Irrelevant and relevant information
Place value	Written representation
Reasonableness	Real world situations
Skip count	Tens place
Three-digit number	

November

Number Relationships/Time and Money

Content Strands

3.N.17	Develop an understanding of the properties of odd/even numbers as a result of addition or subtraction
3.N.18	Use a variety of strategies to add and subtract 3-digit numbers (with and without regrouping)
3.N.6	Use and explain the commutative property of addition and multiplication
3.N.7	Use 1 as the identity element for multiplication
3.N.8	Use the zero property of multiplication
3.N.21	Use the area model, tables, patterns, arrays, and doubling to provide meaning for multiplication
3.N.24	Develop strategies for selecting the appropriate computational and operational method in problem solving situations
3.M.9	Tell time to the minute, using digital and analog clocks
3.M.8	Relate unit fractions to the face of the clock: Whole = 60 minutes ½ = 30 minutes ¼ = 15 minutes
3.M.7	Count and represent combined coins and dollars, using currency symbols ($0.00)

Process Strands

3.PS.14	Make organized lists to solve numerical problems
3.PS.15	Make charts to solve numerical problems
3.PS.13	Work in collaboration with others to solve problems
3.PS.19	State a problem in their own words
3.PS.20	Determine what information is needed to solve a problem
3.PS.21	Discuss with peers to understand a problem situation
3.RP.2	Determine whether a mathematical statement is true or false and explain why.
3.RP.3	Investigate the use of knowledgeable guessing by generalizing mathematical ideas
3.RP.4	Make conjectures from a variety of representations
3.RP.5	Justify general claims or conjectures, using manipulatives, models, and expressions
3.CM.2	Verbally explain their rationale for strategy selection
3.CM.8	Consider strategies used and solutions found in relation to their own work
3.CM.7	Listen for understanding of mathematical solutions shared by other students
3.CN.4	Understand multiple representations and how they are related

Vocabulary

Regrouping
Associative property
Commutative property
Analyze
Discuss
Operation
Method
Property
Time
Rounding
Subtract
Subtraction
Sum
Written representations
Understand
Recognize
Examine
Explain
Explore
Estimate
Analog clock
Time
Calendar
Day
Digital clock
Half hour
Hour
Minute
Use manipulatives
Week
Coin
Dollar
Currency symbols
Decimal
Make a chart
Make a diagram
Organized list
Draw a picture
Process of elimination
Trial and error
A.M. (ante meridian)
P.M. (post meridian)

December – Mid January

Measurement and Geometry

Content Strands

3.M.10	Select and use standard (customary) and non-standard units to estimate measurements
3.M.1	Select tools and units (customary) appropriate for the length measured
3.M.2	Use a ruler/yardstick to measure to the nearest standard unit (whole and ½ inches, whole feet, and whole yards)
3.M.3	Measure objects, using ounces and pounds (EM Chapter 10)
3.M.4	Recognize capacity as an attribute that can be measured (EM Chapter 10)
3.M.5	Compare capacities [e.g., Which contains more? Which contains less?] (EM Chapter 10)
3.M.6	Measure capacity, using cups, pints, quarts, and gallons (EM Chapter 10) *Note: The measurement units of 3.M.3-6 are in chapter ten but will be done in unit 3.*
3.G.1	Define and use correct terminology when referring to shapes (circle, triangle, square, rectangle, rhombus, trapezoid, and hexagon)
3.G.3	Name, describe, compare, and sort three-dimensional shapes: cube, cylinder, sphere, prism, and cone
3.A.2	Describe and extend numeric (+, -) and geometric patterns (Not in EM but will be covered here)
3.G.4	Identify the faces on a three-dimensional shape as two-dimensional shapes
3.G.5	Identify and construct lines of symmetry

Process Strands

3.PS.16	Analyze problems by identifying relationships
3.PS.18	Analyze problems by observing patterns
3.RP.6	Develop and explain an argument using oral, written, concrete, pictorial, and/or graphical forms
3.RP.7	Discuss, listen, and make comments that support or reject claims made by other students
3.RP.8	Support an argument by trying many cases
3.CM.3	Provide reasoning both in written and verbal form
3.CM.4	Organize and accurately label work
3.CM.5	Share organized mathematical ideas through the manipulation of objects, drawings, pictures, charts, graphs, tables, diagrams, models, symbols, and expressions in written and verbal form
3.CM.10	Describe objects, relationships, solutions and rationale using appropriate vocabulary
3.CM.11	Decode and comprehend mathematical visuals and symbols to construct meaning
3.CN.5	Model situations with objects and representations and be able to make observations

3.R.4	Use standard and nonstandard representations with accuracy and detail
3.R.5	Understand similarities and differences in representations
3.R.6	Connect mathematical representations with problem solving

Vocabulary

Capacity	Geometric figure
Cup (c)	Hexagon
Foot (ft)	Line of symmetry
Gallon (gal)	Open figure
Inch (in)	Plane figure
Nonstandard measure	Polygon
Ounce (oz)	Prism
Pint (pt)	Ray
Pound (lb)	Rectangle
Quart (qt)	Rhombus
Standard measure	Shape
Yard (yd)	Side
Angle	Solid figure
Attribute	Sphere
Circle	Square
Closed figure	3-D figures
Cube	Trapezoid
Cylinder	Triangle
Edge	2-D figure
Face	Length

Customary measurement system

Mid January – February

Fractions

Content Strands

3.N.11	Use manipulatives, visual models, and illustrations to name and represent unit fractions (½, 1/3, ¼, 1/5, 1/6, 1/10) as part of a whole or a set of objects. *Note: unit fractions will be explained. Fractions are in Unit 8 and therefore the teachers will do a supplementary unit prior to the NYSED Math 3 assessment.*
3.N.10	Develop an understanding of fractions as part of a whole unit and as parts of a collection
3.N.12	Understand and recognize the meaning of numerator and denominator in the symbolic form of a fraction
3.N.13	Recognize fractional numbers as equal parts of a whole
3.N.27	Check reasonableness of an answer by using estimation
3.N.14	Explore equivalent fractions (½, ⅓, ¼)
3.N.15	Compare and order unit fractions (½, ⅓, ¼) and find their approximate locations on a number line
3.A.1	Use the symbols <, >, = (with and without the use of a number line) to compare whole numbers and unit fractions ½,1/3,1/4,1/5,1/6, and 1/10

Process Strands

3.PS.6	Translate from a picture/diagram to a numeric expression
3.PS.11	Make pictures/diagrams of problems
3.PS.12	Use physical objects to model problems
3.CN.3	Connect and apply mathematical information to solve problems
3.R.7	Construct effective representations to solve problems
3.R.8	Use mathematics to show and understand physical phenomena (e.g., estimate and represent the number of apples in a tree)
3.R.9	Use mathematics to show and understand social phenomena (e.g., determine the number of buses required for a field trip)

Vocabulary

Collaborate	Mathematical statements
Concrete representations	Reasonableness of a solution
Discuss	True/ false
Identify	Denominator
Interpret	Equivalent fraction
Numerator	Fraction
Equivalent	Halving
Argument	Unit fraction
Investigate	Greater than
Explain	Numerator
Justify	Equal to
Make conjectures (predict)	Irrelevant information
Value	Oral and pictorial representations
Less than	Twelfths

March –April

Exploring Multiplication and Division

Content Strands

3.N.19	Develop fluency with single-digit multiplication facts
3.N.20	Use a variety of strategies to solve multiplication problems with factors up to 12 x 12
3.N.22	Demonstrate fluency and apply single-digit division facts
3.N.23	Use tables, patterns, halving, and manipulatives to provide meaning for division

Process Strands

3.PS.8	Select an appropriate representation of a problem.
3.PS.9	Use trial and error to solve problems
3.PS.10	Use process of elimination to solve problems
3.PS.22	Discuss the efficiency of different representations of a problem
3.PS.23	Verify results of a problem
3.PS.17	Analyze problems by identifying relevant versus irrelevant information
3.R.10	Use mathematics to show and understand mathematical phenomena (e.g., use a multiplication grid to solve odd and even number problems)

Vocabulary

Array	Zero
Multiple	Property of multiplication
Multiplication	Divide
Multiply	Division
Product	Dividend
Related facts	Divisor
Factor	Quotient
Answer	Clarify

Commutative property of multiplication

April – May

Estimation Statistics

Content Strands

3.N.25	Estimate numbers up to 500
3.N.26	Recognize real world situations in which an estimate (rounding) is more appropriate
3.S.1	Formulate questions about themselves and their surroundings (Post-March))
3.S.2	Collect data using observation and surveys, and record appropriately (Post-March)
3.G.2	Identify congruent and similar figures (Post-March)

Process Strands

3.PS.7	Represent problem situations in oral, written, concrete, pictorial, and graphical forms
3.CN.2	Compare and contrast mathematical ideas
3.CN.6	Recognize the presence of mathematics in their daily lives
3.CN.7	Apply mathematics to solve problems that develop outside of mathematics
3.CN.8	Recognize and apply mathematics to other disciplines

Vocabulary

Approach
Connect
Contrast
Construct
Differences and similarities
Verbal and written language
Verbal and written forms of reasoning
Similar figures
Congruent
Number sentence
Numeric expression