

Mathematics Grade 3

Curriculum Writers: Adela Felag and Laura Butler

STANDARDS GLEs	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT/ EVIDENCE
<p>CONTENT STRANDS</p> <ul style="list-style-type: none"> • Number and Operations • Geometry and Measurement • Functions and Algebra • Data, Statistics, and Probability <p>PROCESS STRANDS</p> <ul style="list-style-type: none"> • Problem-solving, Reasoning, and Proof • Communication, Connections, and 		<p>NECAP GRADE LEVEL EXPECTATIONS</p> <p>All of the concepts and skills identified at a given grade level are "fair game" for large scale assessment purposes if indicated by (state assessment, grade...).</p> <p>Each GLE includes three parts:</p> <ul style="list-style-type: none"> • A statement in bold, called the "stem" is at the beginning of each GLE. Each "stem" is the same or similar across the grades for a given GLE, and is meant to communicate the main curriculum and instructional focus of the GLE across the grades. • The unbolded text within a GLE indicates how the GLE is specified at a given grade level. There are often several indicators for each GLE stem. Each indicator is coded and indicated fair game for "state" or "local" assessment • Differences between adjacent grades are underlined. Sometimes nothing is underlined within a GLE. In these situations, differences in adjacent grades "assumes increasing text complexity" and is noted for those GLEs. • Each GLE is coded for the content area, the grade level, the GLE "stem" number, and specific indicator for that GLE stem, (e.g. N&O - 5-6.2) means N & O (numbers 	<p>DISTRICT INITIATIVES & RESEARCH</p> <p>The teacher</p> <p>Employs strategies of "best practice" (student-centered, experiential, holistic, authentic, expressive, reflective, social, collaborative, democratic, cognitive, developmental, constructivist/heuristic, and challenging)</p> <p>Facilitates the integration of Applied Learning Standards (SCANS)</p> <ul style="list-style-type: none"> • critical thinking • problem solving • research • communication • reflection and evaluation <p>Applies Principles of Learning (POL) ©</p> <ul style="list-style-type: none"> • organizing for effort • clear expectations • fair and credible evaluations • recognition of accomplishment • academic rigor • accountable talk • socializing intelligence • self-management of learning • learning as apprenticeship <p>Applies Principles of Disciplinary Literacy</p> <p>Differentiates instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> ▪ tiered assignments ▪ jigsawing ▪ pre/post assessments ▪ anchoring ▪ think/pair/share ▪ cubing, etc. <p>Analyzes pre-assessment to direct instruction</p> <p>Provides exemplars and rubrics</p> <p>Addresses multiple intelligences and brain</p>	<p>Textbook</p> <p><i>Everyday Mathematics Grade 3</i></p> <p>Supplementary books</p> <ul style="list-style-type: none"> • <i>McGraw-Hill Mathematics</i> • <i>Teacher Created Materials</i> • <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde • <i>Mathematics Books by Marilyn Burns</i> • <i>Exemplars</i> • <i>Problem Solvers</i> • <i>Box It or Bag It Math</i> • <i>Teaching Children Mathematics</i>, NCTM • <i>Comprehensive Math Assessment, Options Pub., Inc</i> <p>Technology</p> <ul style="list-style-type: none"> • Calculators • Overhead calculator • Computer lab • www.ridoe.net • www.ridoe.ri.gov/instruction/curriculum • NECAP Release tasks • NECompact.org • SCHOOL Resource Folder <p>Materials</p> <ul style="list-style-type: none"> • Unifix cubes • 3D-solids • Rulers (metric), protractors • Number lines • Multiplication charts • Fraction bars 	<p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT (EDM and Problem Solver) • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED</p> <p>Anecdotal records (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Exhibits</p> <p>Interviews</p> <p>Journals/notebooks</p> <p>Graphic organizers and/or visual imagery</p> <p>Multiple Intelligences assessments e.g.</p> <ul style="list-style-type: none"> • role playing, short plays (bodily kinesthetic) • graphic organizing, sketch journals/ cartooning (visual) • collaboration/ conferencing interpersonal • songs, lyrics (musical) <p>Oral presentations</p> <p>Portfolio (samples of process and products)</p> <p>Performance/problem-based tasks</p> <p>Rubrics</p> <p>Tests and quizzes</p>

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<p>Representations</p>		<p>and operations), 5 (grade 5), 6 (6th GLE stem), 2 (the second specific indicator for the 6th GLE stem).</p> <p>If an outcome does not have a GLE number, it indicates this is an additional expectation for Barrington Public Schools.</p> <p>Outcomes and Benchmarks are indicated for all MATHEMATICS GLEs/standards and are secured for this grade level unless indicated with a B for beginning or a D for developing.</p> <p>The instructional strategies, resources, and assessments to the right are a reference list of possible ways to teach and measure the outcomes/benchmarks. One, some, or all of these may be used for specific outcomes/benchmarks. The lists reflect research-based instructional strategies and assessments, and all of the district initiatives. Required district-wide assessments that includes common local assessments (REQUIRED PROBLEMS, MID-YEAR/final exams, quarterly tests), are indicated and it is the expectation they will be used for all outcomes/benchmarks.</p> <p>When an instructional strategy, resource, or assessment is specific to an outcome/benchmark, it may be listed next to the benchmark.</p>	<p>dominance (spatial, bodily kinesthetic, musical, linguistic, intrapersonal, interpersonal, mathematical/logical, and naturalist)</p> <p>Organizes exhibition of student work with rubrics</p> <p>Collaborates with specialist to differentiate instruction for ALL students</p> <p>MATHEMATICS STRATEGIES</p> <p>Employs Mathematics best practice strategies e.g.</p> <ul style="list-style-type: none"> • using manipulatives • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving approach to instruction • integrating content with other core subjects • using appropriate technology • using frequent assessment to modify instruction • modeling functions a calculator <p>Adapts reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring • predicting • making connections • determining importance • synthesizing 	<ul style="list-style-type: none"> • EDM cards • EDM games • Graphing paper <p><u>School library resources</u></p> <ul style="list-style-type: none"> • <i>Classroom Instruction That Works, Marzano</i> <p><u>Community</u></p>	

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<p>1. NUMBER and OPERATIONS</p> <p>1.1 Rational numbers</p>		<p>The student</p> <p>1.1.1 Demonstrates conceptual understanding of rational numbers using models, explanations, or other representations; with respect to:</p> <ul style="list-style-type: none"> • whole numbers from 0 to 999 (0 to 999,999) (D) through <ul style="list-style-type: none"> ○ equivalency e.g. $10 = 5 + 5$ ○ composition e.g. $2 + 2 + 4 = 8$ ○ decomposition e.g. $8 = 2 + 2 + 4$ ○ place value e.g. seven hundred, thirty-nine ○ expanded notation e.g. $134 = 100 + 30 + 4$ • positive fractional numbers benchmark fractions: <ul style="list-style-type: none"> ○ halves, thirds, fourths, fifths, sixths, eighths, tenths ○ as a part to whole relationship in area and sets where the number of parts in the whole is equal to the denominator and ○ linear models (D) e.g. number line, scales (temperature), and linear measurements • powers of 10 (10, 100) (B) • decimals using models, explanations, or other representations <ul style="list-style-type: none"> ○ as hundredths within the context of money M(N&O)-3-1 (state assessment) or ○ tenths within the context of metric measurements (e.g., 2.3 cm) (B) 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> • using manipulatives • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving approach to instruction • integrating content with other core subjects • using appropriate technology • using frequent assessment to modify instruction • modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> ▪ tiered assignments ▪ jigsawing ▪ pre/post assessments ▪ anchoring ▪ think/pair/share 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 3</i></p> <ul style="list-style-type: none"> • Units 2,5,8 <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> • McGraw-Hill Mathematics • Teacher Created Materials • <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde • Mathematics Books by Marilyn Burns • Exemplars • Problem Solvers • Box It or Bag It Math • <i>Teaching Children Mathematics</i>, NCTM • <i>Comprehensive Math Assessment</i>, Options Pub., Inc <p><u>Technology</u></p> <ul style="list-style-type: none"> • Calculators • Overhead calculator • Computer lab • www.ridoe.net • www.ride.ri.gov/instruction/curriculum • NECAP Release tasks • NECompact.org • SCHOOL Resource Folder 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT (EDM and Problem Solver) • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Performance-based Tasks</p> <p>Rubrics</p> <p>Tests/ quizzes</p>

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		<p>1.1.2 Understands, uses, applies appropriate technology to solve problems</p> <p>1.1.3 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> • Make a Number #3 • Fraction Riddles #1 • Billy's Bicycle #2 • Shop How Many 8s? #7 	<ul style="list-style-type: none"> ▪ cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring • predicting • making connections • determining importance • synthesizing 	<p>Materials</p> <ul style="list-style-type: none"> • Unifix cubes • 3D-solids • Rulers (metric), protractors • Number lines • Multiplication charts • Fraction bars • EDM cards • EDM games <p>School library resources</p> <ul style="list-style-type: none"> • Classroom Instruction That Works, Marzano <p>Community</p>	<p>Visual representation (e.g. Power Point™)</p>
<p>1. NUMBER and OPERATIONS</p> <p>1.2 Relative magnitude of numbers</p>		<p>The student</p> <p>1.2.1 Demonstrates understanding of the</p> <ul style="list-style-type: none"> • relative magnitude of numbers from 0 to 999 and 0 to 999,999 (D) by using models, number lines, or explanations by <ul style="list-style-type: none"> • ordering whole numbers • comparing whole numbers to benchmark whole numbers (100, 250, 500, 750) • comparing whole numbers to each other • <u>comparing, identifying equivalent positive fractional numbers (halves, thirds, fourths) M(N&O)-3-2 (state assessment)</u> • <u>ordering positive fractional numbers (halves, thirds, fourths) (D)</u> • <u>decimals to hundredths (D)</u> 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> • using manipulatives • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • <u>constructing written responses defending the student's mathematics</u> • facilitating problem solving approach to instruction • integrating content with other core subjects • using appropriate technology • using frequent assessment 	<p>Resources, also see pages 1-2</p> <p>Textbook</p> <p><i>Everyday Mathematics Grade 3</i></p> <ul style="list-style-type: none"> • Units 2,5,8 <p>Supplementary books</p> <ul style="list-style-type: none"> • McGraw-Hill Mathematics • Teacher Created Materials • <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde • Mathematics Books by Marilyn Burns • Exemplars • Problem Solvers • Box It or Bag It Math • <i>Teaching Children Mathematics</i>, NCTM 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT (EDM and Problem Solver) • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p>

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		<p>1.2.2 Understands, uses, applies appropriate technology to solve problems</p> <p>1.2.3 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> • How Many Mittens? #5 • Reading Contest #6 • What's the Best Deal? #9 • Pieces of Pizza #8 • Fraction Facts #4 	<p>to modify instruction</p> <ul style="list-style-type: none"> • modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> ▪ tiered assignments ▪ jigsawing ▪ pre/post assessments ▪ anchoring ▪ think/pair/share ▪ cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring • predicting • making connections • determining importance • synthesizing 	<ul style="list-style-type: none"> • <i>Comprehensive Math Assessment, Options Pub., Inc</i> <p>Technology</p> <ul style="list-style-type: none"> • Calculators • Overhead calculator • Computer lab • www.ridoe.net • www.ridoe.net/instruction/curriculum • NECAP Release tasks • NECompact.org SCHOOL Resource Folder <p>Materials</p> <ul style="list-style-type: none"> • Unifix cubes • 3D-solids • Rulers (metric), protractors • Number lines • Multiplication charts • Fraction bars • EDM cards • EDM games <p>School library resources</p> <ul style="list-style-type: none"> • <i>Classroom Instruction That Works, Marzano</i> • Literature Link in School Resource Folder <p>Community</p>	<p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Performance-based Tasks</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>1. NUMBER and OPERATIONS</p> <p>1.3 Operations</p>		<p>The student</p> <p>1.3.1 Demonstrates conceptual understanding of mathematical operations using models, number lines, or explanations by</p> <ul style="list-style-type: none"> • describing or illustrating the inverse 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> • using manipulatives 	<p>Resources, also see pages 1-2</p> <p>Textbook</p> <p><i>Everyday Mathematics Grade 3</i></p> <ul style="list-style-type: none"> • <i>Units 2,4,7,8,9</i> 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT

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		<p><u>relationship between addition and subtraction of whole numbers</u></p> <ul style="list-style-type: none"> o e.g. $5+3=8$; $8-3=5$ <ul style="list-style-type: none"> • <u>describing or illustrating the relationship between repeated addition and multiplication.</u> <ul style="list-style-type: none"> o e.g. $4+4+4=12$; $4 \times 3=12$ <p>M(N&O)-3-3 (state assessment)</p> <ul style="list-style-type: none"> • describing or illustrating the relationship between repeated subtraction and division (no remainders) (D) <ul style="list-style-type: none"> o e.g. $12-4-4-4=0$; $12/4=3$ • the inverse relationship between multiplication and division of whole numbers (D) <ul style="list-style-type: none"> o e.g. $4 \times 4=16$; $16/4=4$ • the addition or subtraction of positive fractional numbers with like denominators (D) M(N&O)-4-3 <p>1.3.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>1.3.3 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> • Go Fish #11 • The Doorbell Rang #12 • Reading Contest #6 • Write a Story #10 	<ul style="list-style-type: none"> • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving approach to instruction • integrating content with other core subjects • using appropriate technology • using frequent assessment to modify instruction • modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> ▪ tiered assignments ▪ jigsawing ▪ pre/post assessments ▪ anchoring ▪ think/pair/share ▪ cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies 	<p><u>Supplementary books</u></p> <ul style="list-style-type: none"> • McGraw--Hill Mathematics • Teacher Created Materials • Comprehending Math: Adapting Reading Strategies to Teach Math, K-6, Arthur Hyde • Mathematics Books by Marilyn Burns • Exemplars • Problem Solvers • Box It or Bag It Math • Teaching Children Mathematics, NCTM • Comprehensive Math Assessment, Options Pub., Inc <p><u>Technology</u></p> <ul style="list-style-type: none"> • Calculators • Overhead calculator • Computer lab • www.ri.oe.net • www.ride.ri.gov/instruction/curriculum • NECAP Release tasks • NECompact.org • SCHOOL Resource Folder <p><u>Materials</u></p> <ul style="list-style-type: none"> • Unifix cubes • 3D-solids • Rulers (metric), protractors • Number lines • Multiplication charts • Fraction bars • EDM cards • EDM games 	<p>(EDM and Problem Solver)</p> <ul style="list-style-type: none"> • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p><u>SUGGESTED ASSESSMENTS</u></p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Performance-based Tasks</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

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			<ul style="list-style-type: none"> • inferring • predicting • making connections • determining importance • synthesizing 	<u>School library resources</u> <ul style="list-style-type: none"> • <i>Classroom Instruction That Works</i>, Marzano <u>Community</u>	
<p>1. NUMBER and OPERATIONS</p> <p>1.4 Mathematical operations</p>		<p>The student</p> <p>1.4.1 Accurately solves problems involving</p> <ul style="list-style-type: none"> • addition and subtraction with regrouping • the concept of multiplication • addition or subtraction of decimals (in the context of money). M(N&O)-3-4 4 (state assessment) • multiple operations on whole numbers (Multiplication limited to 2 digits by 2 digits, and division limited to 1 digit divisors.) (D) • the use of the properties of factors and multiples; (D) • addition or subtraction of decimals and positive proper fractions with like denominators. (D)M(N&O)-4-4 <p>1.4.2 Understands, uses, applies appropriate technology to solve problems</p> <p>1.4.3 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> • Harvey's Hot Dog Problem #14 • Barn Full of Animals #15 • Family Day at the Zoo #16 • Admission for the Zoo #13 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> • using manipulatives • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving approach to instruction • integrating content with other core subjects • using appropriate technology • using frequent assessment to modify instruction • modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 3</i></p> <ul style="list-style-type: none"> • Units 2,4,5,8 <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> • <i>McGraw-Hill Mathematics</i> • <i>Teacher Created Materials</i> • <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde • <i>Mathematics Books by Marilyn Burns</i> • <i>Exemplars</i> • <i>Problem Solvers</i> • <i>Box It or Bag It Math</i> • <i>Teaching Children Mathematics</i>, NCTM • <i>Comprehensive Math Assessment</i>, Options Pub., Inc. <p><u>Technology</u></p> <ul style="list-style-type: none"> • Calculators • Overhead calculator • Computer lab • www.ride.net • www.ride.ri.gov/instru 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT (EDM and Problem Solver) • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p>

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			<ul style="list-style-type: none"> ▪ tiered assignments ▪ jigsawing ▪ pre/post assessments ▪ anchoring ▪ think/pair/share ▪ cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring • predicting • making connections • determining importance • synthesizing 	<p>tion/curriculum</p> <ul style="list-style-type: none"> • NECAP Release tasks • NECompact.org • SCHOOL Resource Folder <p><u>Materials</u></p> <ul style="list-style-type: none"> • Unifix cubes • 3D-solids • Rulers (metric), protractors • Number lines • Multiplication charts • Fraction bars • EDM cards • EDM games <p><u>School library resources</u></p> <ul style="list-style-type: none"> • Classroom Instruction That Works, Marzano <p><u>Community</u></p>	<p>Performance-based Tasks</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>1. NUMBER and OPERATIONS</p> <p>1.5 Mental calculations</p>		<p>The student</p> <p>1.5.1 Mentally</p> <ul style="list-style-type: none"> • adds and subtracts whole number facts through 20 • <u>adds two-digit and one-digit whole numbers;</u> • <u>adds combinations of two-digit and three-digit whole numbers that are multiples of ten (e.g., 60 +50, 300 + 400, 320 + 90);</u> • <u>subtracts a one-digit whole number from a two-digit whole number (e.g., 37 - 5); and</u> • <u>subtracts two-digit whole numbers that are multiples of ten and three-digit whole numbers that are multiples of one hundred (e.g., 50 - 20, 500 - 200). M(N&O)-3-6</u> 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> • using manipulatives • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <p>Everyday Mathematics Grade 3</p> <ul style="list-style-type: none"> • Units 2,4,7 <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> • McGraw--Hill Mathematics • Teacher Created Materials • Comprehending Math: Adapting Reading Strategies to Teach Math, K-6, Arthur Hyde • Mathematics Books by Marilyn Burns 	<p>Assessments/evidence, also see pages 1-2</p> <p><u>REQUIRED LOCAL ASSESMENTS</u></p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT (EDM and Problem Solver) • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p><u>SUGGESTED ASSESSMENTS</u></p> <p>Anecdotal record (e.g. defends</p>

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		<ul style="list-style-type: none"> multiplies whole number facts to a product of 100, and calculates related division facts <p>(D) M(N&O)-4-6, e.g. fact triangle</p> <p>IMPORTANT: <i>The intent of this GLE is to embed mental arithmetic throughout the instructional program, not to teach it as a separate unit.</i></p> <p>1.5.3 Understands, uses, applies appropriate technology to solve problems</p> <p>1.5.4 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> Making Change # 17 	<p>approach to instruction</p> <ul style="list-style-type: none"> integrating content with other core subjects using appropriate technology using frequent assessment to modify instruction modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> tiered assignments jigsawing pre/post assessments anchoring think/pair/share cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> K-W-L visualizing asking strategies inferring predicting making connections determining importance synthesizing 	<ul style="list-style-type: none"> <i>Exemplars</i> <i>Problem Solvers</i> Box It or Bag It Math <i>Teaching Children Mathematics</i>, NCTM <i>Comprehensive Math Assessment</i>, Options Pub., Inc. <p>Technology</p> <ul style="list-style-type: none"> Calculators Overhead calculator Computer lab www.ridoe.net www.ridoe.net/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder <p>Materials</p> <ul style="list-style-type: none"> Unifix cubes 3D-solids Rulers (metric), protractors Number lines Multiplication charts Fraction bars EDM cards EDM games <p>School library resources</p> <ul style="list-style-type: none"> <i>Classroom Instruction That Works</i>, Marzano <p>Community</p>	<p>student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Performance-based Tasks</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

Mathematics Grade 3

Curriculum Writers: Adela Felag and Laura Butler

STANDARDS GLEs	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT/ EVIDENCE
<p>1. NUMBER and OPERATIONS</p> <p>1.6 Estimates</p>		<p>The student</p> <p>1.6.1 Makes estimates in a given situation by</p> <ul style="list-style-type: none"> identifying when estimation is appropriate selecting the appropriate method of estimation evaluating the reasonableness of solutions appropriate to grade level GLEs across content strands. M(N&O)-3-7 <p>IMPORTANT: <i>The intent of this GLE is to embed estimation throughout the instructional program, not to teach it as a separate unit.</i></p> <p>1.6.2 Understands, uses, applies appropriate technology to solve problems</p> <p>1.6.3 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> Exact or Estimate #18 Turkey Talk #19 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> using manipulatives facilitating cooperative group work discussing mathematics questioning and making conjectures justifying of thinking constructing written responses defending the student's mathematics facilitating problem solving approach to instruction integrating content with other core subjects using appropriate technology using frequent assessment to modify instruction modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> tiered assignments jigsawing pre/post assessments anchoring think/pair/share cubing, etc. 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 3</i></p> <ul style="list-style-type: none"> Units 2,7 <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> McGraw--Hill Mathematics Teacher Created Materials Comprehending Math: Adapting Reading Strategies to Teach Math, K-6, Arthur Hyde Mathematics Books by Marilyn Burns Exemplars Problem Solvers Box It or Bag It Math Teaching Children Mathematics, NCTM Comprehensive Math Assessment, Options Pub., Inc. <p><u>Technology</u></p> <ul style="list-style-type: none"> Calculators Overhead calculator Computer lab www.ridoe.net www.ridoe.net/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder <p><u>Materials</u></p> <ul style="list-style-type: none"> Unifix cubes 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> MID-YEAR ASSESSMENT (EDM and Problem Solver) END-OF-YEAR ASSESSMENT (EDM and Problem Solver) PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Performance-based Tasks</p> <p>Rubrics</p> <p>Tests/ quizzes</p>

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STANDARDS GLEs	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT/ EVIDENCE
			Reading strategies to teach mathematics (Hyde) <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring • predicting • making connections • determining importance • synthesizing 	<ul style="list-style-type: none"> • 3D-solids • Rulers (metric), protractors • Number lines • Multiplication charts • Fraction bars • EDM cards • EDM games <u>School library resources</u> <ul style="list-style-type: none"> • <i>Classroom Instruction That Works</i>, Marzano <u>Community</u>	Visual representation (e.g. Power Point™)
1. NUMBER and OPERATIONS 1.7 Properties of numbers		<p>The student</p> <p>1.7.1 Applies properties of numbers to solve problems and to simplify computations involving whole numbers</p> <ul style="list-style-type: none"> • odd, even • <u>multiplicative property of zero for single-digit whole numbers</u> [$6 \times 0 = 0$] M(N&O)-3-8 • remainders (D) M(N&O)-4-8 <p>1.7.2 Applies field properties to solve problems and to simplify computations</p> <ul style="list-style-type: none"> • commutative for addition, e.g. $(6+4 = 4+6$ • associative for addition, e.g. $(2+(7+3) = 2+(7+3)$ • <u>identity for multiplication</u>, e.g. $a \times 1 = a$ • <u>commutative for multiplication for single-digit whole numbers</u> [e.g., $3 \times 4 = 4 \times 3$]. M(N&O)-3-8 <p>1.7.3 Understands, uses, applies appropriate</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> • using manipulatives • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving approach to instruction • integrating content with other core subjects • using appropriate technology • using frequent assessment to modify instruction 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 3</i></p> <ul style="list-style-type: none"> • Units 4,9 <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> • <i>McGraw-Hill Mathematics</i> • <i>Teacher Created Materials</i> • <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde • <i>Mathematics Books by Marilyn Burns</i> • <i>Exemplars</i> • <i>Problem Solvers</i> • <i>Box It or Bag It Math</i> • <i>Teaching Children Mathematics</i>, NCTM • <i>Comprehensive Math Assessment, Options</i> 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT (EDM and Problem Solver) • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p>

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		<p>technology to solve problems.</p> <p>1.7.4 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> The Doorbell Rang #12 Sharing Cookies #20 	<ul style="list-style-type: none"> modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> tiered assignments jigsawing pre/post assessments anchoring think/pair/share cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> K-W-L visualizing asking strategies inferring predicting making connections determining importance synthesizing 	<p>Pub., Inc.</p> <p>Technology</p> <ul style="list-style-type: none"> Calculators Overhead calculator Computer lab www.ridoe.net www.ridoe.net/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder <p>Materials</p> <ul style="list-style-type: none"> Unifix cubes 3D-solids Rulers (metric), protractors Number lines Multiplication charts Fraction bars EDM cards EDM games <p>School library resources</p> <ul style="list-style-type: none"> <i>Classroom Instruction That Works</i>, Marzano <p>Community</p>	<p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Performance-based Tasks</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>2. GEOMETRY AND MEASUREMENT</p> <p>2.1 Angle relationships</p>		<p>The student</p> <p>2.1.1 Uses properties or attributes of</p> <ul style="list-style-type: none"> angles (number of angles) or sides (number of sides or length of sides) (parallelism or perpendicularity (D)) composition or decomposition of shapes to create new polygons 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> using manipulatives facilitating cooperative group work discussing mathematics questioning and making 	<p>Resources, also see pages 1-2</p> <p>Textbook</p> <p><i>Everyday Mathematic Grade 3</i></p> <ul style="list-style-type: none"> Units 3 & 6 <p>Supplementary books</p> <ul style="list-style-type: none"> <i>McGraw--Hill Mathematics</i> <i>Teacher Created</i> 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> MID-YEAR ASSESSMENT (EDM and Problem Solver) END-OF-YEAR ASSESSMENT (EDM and

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		<p><u>to identify, describe, or distinguish among</u></p> <ul style="list-style-type: none"> triangles, squares, rectangles, rhombi, trapezoids, hexagons, or circles. M(G&M)-3-1 (state assessment) <p>2.1.2 Classifies angles relative to 90° as more than, less than or equal to ($>$, $<$, or $=$). (D)</p> <p>2.1.3 Understands, uses, applies appropriate technology to solve problems.</p> <p>2.1.4 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> Make a Fish #21 Stick Math #22 	<p>conjectures</p> <ul style="list-style-type: none"> justifying of thinking constructing written responses defending the student's mathematics facilitating problem solving approach to instruction integrating content with other core subjects using appropriate technology using frequent assessment to modify instruction modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> tiered assignments jigsawing pre/post assessments anchoring think/pair/share cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> K-W-L visualizing asking strategies inferring predicting making connections determining importance 	<p><i>Materials</i></p> <ul style="list-style-type: none"> <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde Mathematics Books by Marilyn Burns Exemplars Problem Solvers Box It or Bag It Math Teaching Children Mathematics, NCTM Comprehensive Math Assessment, Options Pub., Inc. <p>Technology</p> <ul style="list-style-type: none"> Calculators Overhead calculator Computer lab www.ridoe.net www.ride.ri.gov/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder <p>Materials</p> <ul style="list-style-type: none"> Unifix cubes 3D-solids Rulers (metric), protractors EDM cards EDM games Geoboards Geometry template Graphing paper Dot paper <p>School library resources</p> <ul style="list-style-type: none"> Classroom Instruction That Works, Marzano Knights of the Round 	<p>Problem Solver)</p> <ul style="list-style-type: none"> PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Performance-based Tasks</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

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			<ul style="list-style-type: none"> synthesizing 	<i>Table Series</i> Community	
<p>2. GEOMETRY AND MEASUREMENT</p> <p>2.2 Properties or attributes</p>		<p>The student</p> <p>2.2.1 Uses properties or attributes (shape of bases or number of lateral faces) to identify, compare, or describe three-dimensional shapes (rectangular prisms, triangular prisms, cylinders, or spheres). (D) M(G&M)-4-3</p> <p>2.2.2 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> Blindfolded #23 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> using manipulatives facilitating cooperative group work discussing mathematics questioning and making conjectures justifying of thinking constructing written responses defending the student's mathematics facilitating problem solving approach to instruction integrating content with other core subjects using appropriate technology using frequent assessment to modify instruction models functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> tiered assignments jigsawing 	<p>Resources, also see pages 1-2</p> <p>Textbook</p> <ul style="list-style-type: none"> <i>Every Day Math Grade 3</i> <i>Units 3 & 6</i> <p>Supplementary books</p> <ul style="list-style-type: none"> <i>McGraw-Hill Mathematics</i> <i>Teacher Created Materials</i> <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde <i>Mathematics Books</i> by Marilyn Burns <i>Exemplars</i> <i>Problem Solvers</i> <i>Box It or Bag It Math</i> <i>Teaching Children Mathematics</i>, NCTM <i>Comprehensive Math Assessment</i>, Options Pub., Inc. <p>Technology</p> <ul style="list-style-type: none"> Calculators Overhead calculator Computer lab www.glencoe.com www.ridoe.net www.ride.ri.gov/instruction/curriculum NECAP Release tasks NECompact.org 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> MID-YEAR ASSESSMENT (EDM and Problem Solver) END-OF-YEAR ASSESSMENT (EDM and Problem Solver) PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Performance-based Tasks</p> <p>Tests/ quizzes</p>

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			<ul style="list-style-type: none"> ▪ pre/post assessments ▪ anchoring ▪ think/pair/share ▪ cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring • predicting • making connections • determining importance • synthesizing 	<ul style="list-style-type: none"> • SCHOOL website (Share Point) <p><u>Materials</u></p> <ul style="list-style-type: none"> • Unifix cubes • 3D-solids • Rulers (metric), protractors • EDM cards • EDM games • Geoboards • Geometry template • graphing paper • dot paper • interlocking cubes <p><u>School library resources</u></p> <ul style="list-style-type: none"> • Classroom Instruction That Works, Marzano <p><u>Community</u></p>	<p>Visual representation (e.g. Power Point™)</p>
<p>2 GEOMETRY AND MEASUREMENT</p> <p>2.3 Congruency</p>		<p>The student</p> <p>2.3.1 Demonstrates conceptual understanding of congruency by</p> <ul style="list-style-type: none"> • <u>matching congruent figures using reflections, translations, and rotations (flips, slides, and turns) (e.g., recognizing when pentominoes are reflections, translations and rotations of each other);</u> • <u>composing and decomposing two- and three-dimensional objects using models or explanations (e.g., Given a cube, students use blocks to construct a congruent cube.);</u> and by • using line symmetry to demonstrate congruent parts within a shape. 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> • using manipulatives • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving approach to instruction 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 3</i></p> <ul style="list-style-type: none"> • Units 3 & 6 <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> • McGraw--Hill Mathematics • Teacher Created Materials • Escher - Tessellations • Quilting books • <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde • Mathematics Books 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT (EDM and Problem Solver) • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p>

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		<p>M(G&M)-3-4</p> <p>2.3.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>2.3.3 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> • Rectangle Symmetry #24 • Congruent Figures #25 	<ul style="list-style-type: none"> • integrating content with other core subjects • using appropriate technology • using frequent assessment to modify instruction • modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> ▪ tiered assignments ▪ jigsawing ▪ pre/post assessments ▪ anchoring ▪ think/pair/share ▪ cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring • predicting • making connections • determining importance • synthesizing 	<p>by Marilyn Burns</p> <ul style="list-style-type: none"> • <i>Exemplars</i> • <i>Problem Solvers</i> • <i>Box It or Bag It Math</i> • <i>Teaching Children Mathematics</i>, NCTM • <i>Comprehensive Math Assessment</i>, Options Pub., Inc. <p><u>Technology</u></p> <ul style="list-style-type: none"> • Calculators • Overhead scientific calculator • Computer lab • www.ridoe.net • www.ridoe.ri.gov/instruction/curriculum • NECAP Release tasks • NECompact.org • SCHOOL Resource Folder <p><u>Materials</u></p> <ul style="list-style-type: none"> • Unifix cubes • 3D-solids • Rulers (metric), protractors • EDM cards • EDM games • Geoboards • Geometry template • Tangrams • Graphing paper • Dot paper <p><u>School library resources</u></p> <ul style="list-style-type: none"> • <i>Classroom Instruction That Works</i>, Marzano <p><u>Community</u></p>	<p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Performance-based Tasks</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

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<p>2. GEOMETRY AND MEASUREMENT</p> <p>2.4 Similarity</p>		<p>The student</p> <p>2.4.1 Demonstrates conceptual understanding of similarity by identifying similar shapes. M(G&M)-3-5</p> <p>2.4.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>2.4.3 REQUIRED PROBLEMS</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> • using manipulatives • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving approach to instruction • integrating content with other core subjects • using appropriate technology • using frequent assessment to modify instruction • modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> ▪ tiered assignments ▪ jigsawing ▪ pre/post assessments ▪ anchoring ▪ think/pair/share ▪ cubing, etc. 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 3</i></p> <ul style="list-style-type: none"> • Units 3 & 6 <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> • McGraw--Hill Mathematics • Teacher Created Materials • <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde • Mathematics Books by Marilyn Burns • <i>Exemplars</i> • <i>Problem Solvers</i> • Box It or Bag It Math • <i>Teaching Children Mathematics</i>, NCTM • <i>Comprehensive Math Assessment</i>, Options Pub., Inc. <p><u>Technology</u></p> <ul style="list-style-type: none"> • Calculators • Overhead calculator • Computer lab • www.ridoe.net • www.ride.ri.gov/instruction/curriculum • NECAP Release tasks • NECompact.org • SCHOOL Resource Folder <p><u>Materials</u></p> <ul style="list-style-type: none"> • Unifix cubes 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT (EDM and Problem Solver) • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Performance-based Tasks</p> <p>Rubrics</p> <p>Tests/ quizzes</p>

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STANDARDS GLEs	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT/ EVIDENCE
			Reading strategies to teach mathematics (Hyde) <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring • predicting • making connections • determining importance • synthesizing 	<ul style="list-style-type: none"> • 3D-solids • Rulers (metric), protractors • EDM cards • EDM games • Geoboards • Geometry template • Tangrams • Graphing paper • Dot paper <p><u>School library resources</u></p> <ul style="list-style-type: none"> • Classroom Instruction That Works, Marzano <p><u>Community</u></p>	Visual representation (e.g. Power Point™)
2. GEOMETRY AND MEASUREMENT 2.5 Perimeter of polygons		<p>The student</p> <p>2.5.1 Demonstrates conceptual understanding of perimeter of polygons, and the area of rectangles on grids using a variety of models or manipulatives. M(G&M)-3-6 (state assessment)</p> <p>2.5.2 Demonstrates understanding of polygons or irregular shapes on grids using formulas (D)</p> <p>2.5.3 Expresses all measures using appropriate units. M(G&M)-3-6 (state assessment)</p> <p>2.5.4 Understands, uses, applies appropriate technology to solve problems.</p> <p>2.5.5 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> • Post Office Displays #27 • A Turkey of a Problem #28 • Joe's Fence #29 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> • using manipulatives • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving approach to instruction • integrating content with other core subjects • using appropriate technology • using frequent assessment 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <p><i>Everyday Mathematics Grade 3</i></p> <ul style="list-style-type: none"> • Units 3 & 6 <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> • McGraw-Hill Mathematics • Teacher Created Materials • Comprehending Math: Adapting Reading Strategies to Teach Math, K-6, Arthur Hyde • Mathematics Books by Marilyn Burns • Exemplars • Problem Solvers • Box It or Bag It Math • Teaching Children Mathematics, NCTM 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESMENTS</p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT (EDM and Problem Solver) • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p>

Mathematics Grade 3

Curriculum Writers: Adela Felag and Laura Butler

STANDARDS GLEs	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT/EVIDENCE
		<ul style="list-style-type: none"> Playground Design #30 	<p>to modify instruction</p> <ul style="list-style-type: none"> modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> tiered assignments jigsawing pre/post assessments anchoring think/pair/share cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> K-W-L visualizing asking strategies inferring predicting making connections determining importance synthesizing 	<ul style="list-style-type: none"> <i>Comprehensive Math Assessment</i>, Options Pub., Inc. <p><u>Technology</u></p> <ul style="list-style-type: none"> Calculators Overhead calculator Computer lab www.ridoe.net www.ridoe.net/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder <p><u>Materials</u></p> <ul style="list-style-type: none"> Unifix cubes 3D-solids Rulers (metric), protractors EDM cards EDM games Geoboards Geometry template Tangrams Graphing paper Dot paper <p><u>School library resources</u></p> <ul style="list-style-type: none"> <i>Classroom Instruction That Works</i>, Marzano <p><u>Community</u></p>	<p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Performance-based Tasks</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>2. GEOMETRY AND MEASUREMENT</p> <p>2.6 Measurement and conversions</p>		<p>The student</p> <p>2.6.1 Measures and uses units of measures appropriately and consistently, and makes conversions within systems when solving problems across the content strands. M(G&M)-3-7 (state assessment)</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> using manipulatives facilitating cooperative group work 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <p><i>Everyday Mathematics Grade 3</i></p> <ul style="list-style-type: none"> Units 3, 6, & 10 <p><u>Supplementary books</u></p>	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> MID-YEAR ASSESSMENT (EDM and Problem Solver) END-OF-YEAR

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STANDARDS GLEs	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT/ EVIDENCE
		<p>Length</p> <ul style="list-style-type: none"> units (accuracy): Inch (to $\frac{1}{2}$ inch, $\frac{1}{4}$ inch (D)); Foot (to whole inch); Centimeter (to whole ($\frac{1}{2}$ (B) centimeter); Meter (to whole centimeter) Yard; Mile (use in scale questions); Kilometers (use in scale questions) equivalencies: 12 inches in 1 foot; 100 Centimeters in 1 Meter; 3 feet in a yard (D); 36 inches in a yard (D) <p>Time</p> <ul style="list-style-type: none"> units (accuracy): hour (to 5 minute interval); day; year equivalencies: 24 hours in 1 day; 7 days in 1 week; 365 days in 1 year; 60 seconds in a minute (D); 60 minutes in 1 hour (D) <p>Temperature</p> <ul style="list-style-type: none"> unit (accuracy): C° and F° (to 1 degree) <p>Capacity</p> <ul style="list-style-type: none"> unit (accuracy): quart (to whole quart) <p>Mass</p> <ul style="list-style-type: none"> unit (accuracy): Kilogram (to whole gram), Gram (to whole gram) <p>Weight</p> <ul style="list-style-type: none"> unit (accuracy): pound (to whole pound) <p>2.6.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>2.6.3 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> Growing Plants #31 	<ul style="list-style-type: none"> discussing mathematics questioning and making conjectures justifying of thinking constructing written responses defending the student's mathematics facilitating problem solving approach to instruction integrating content with other core subjects using appropriate technology using frequent assessment to modify instruction modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> tiered assignments jigsawing pre/post assessments anchoring think/pair/share cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> K-W-L visualizing asking strategies inferring predicting 	<ul style="list-style-type: none"> <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6, Arthur Hyde</i> Mathematics Books by Marilyn Burns Exemplars Problem Solvers Box It or Bag It Math Teaching Children Mathematics, NCTM Comprehensive Math Assessment, Options Pub., Inc. <p>Technology</p> <ul style="list-style-type: none"> Scientific calculator Overhead calculator Computer lab www.ridoe.net www.ridoe.net/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder Geometers Sketch Pad <p>Materials</p> <ul style="list-style-type: none"> Unifix cubes 3D-solids Rulers (metric), protractors <p>School library resources</p> <ul style="list-style-type: none"> Classroom Instruction That Works, Marzano <p>Community</p>	<p>ASSESSMENT (EDM and Problem Solver)</p> <ul style="list-style-type: none"> PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

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STANDARDS GLEs	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT/ EVIDENCE
		<ul style="list-style-type: none"> Going to the Fair #32 A Very Tall Lady #33 Crab's Journey #34 Filling a Pool #35 	<ul style="list-style-type: none"> making connections determining importance synthesizing 		
<p>2. GEOMETRY AND MEASUREMENT</p> <p>2.7 Spatial reasoning and visulaization</p>		<p>The student</p> <p>2.7.1 Demonstrates understanding of spatial relationships using location and position by</p> <ul style="list-style-type: none"> interpreting and giving directions from one location to another (e.g., classroom to the gym, from school to home) using positional words; and between locations on a map or coordinate grid (first quadrant) using positional words or compass directions. M(G&M)-3-9 plotting points in the first quadrant in context (e.g., games, mapping) (D) finding the horizontal and vertical distances between points on a coordinate grid. (D) M(G&M)-4-9 <p>2.7.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>2.7.3 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> Graphing Sequential Patterns #36 Coordinates on a Map #37 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> using manipulatives facilitating cooperative group work discussing mathematics questioning and making conjectures justifying of thinking constructing written responses defending the student's mathematics facilitating problem solving approach to instruction integrating content with other core subjects using appropriate technology using frequent assessment to modify instruction modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 3</i></p> <ul style="list-style-type: none"> Unit 10 <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde Mathematics Books by Marilyn Burns <i>Exemplars</i> <i>Problem Solvers</i> Box It or Bag It Math <i>Teaching Children Mathematics</i>, NCTM <i>Comprehensive Math Assessment</i>, Options Pub., Inc. <p><u>Technology</u></p> <ul style="list-style-type: none"> Scientific calculator Overhead calculator Computer lab www.ridoe.net www.ride.ri.gov/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> MID-YEAR ASSESSMENT (EDM and Problem Solver) END-OF-YEAR ASSESSMENT (EDM and Problem Solver) PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p>

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STANDARDS GLEs	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT/ EVIDENCE
			<ul style="list-style-type: none"> ▪ tiered assignments ▪ jigsawing ▪ pre/post assessments ▪ anchoring ▪ think/pair/share ▪ cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring • predicting • making connections • determining importance • synthesizing 	<p>Folder</p> <ul style="list-style-type: none"> • Geometers Sketch Pad <p><u>Materials</u></p> <ul style="list-style-type: none"> • Unifix cubes • 3D-solids • Rulers (metric), protractors <p><u>School library resources</u></p> <ul style="list-style-type: none"> • <i>Classroom Instruction That Works</i>, Marzano <p><u>Community</u></p>	<p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>2. GEOMETRY AND MEASUREMENT</p> <p>2.8 spatial reasoning and visualization</p>		<p>The student</p> <p>2.8.1 Demonstrates conceptual understanding of spatial reasoning and visualization by</p> <ul style="list-style-type: none"> • copying • comparing • drawing models of triangles, squares, rectangles, rhombi, trapezoids, hexagons, and circles, (octagons D) • building models of rectangular prisms from (two-dimensional D) three-dimensional representations. M(G&M)-3-10 <p>2.8.2 Understands, uses, applies appropriate technology to solve problems.</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> • using manipulatives • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 3</i></p> <ul style="list-style-type: none"> • Units 3 & 6 <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> • <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde • <i>Mathematics Books by Marilyn Burns</i> • <i>Exemplars</i> • <i>Problem Solvers</i> • <i>Box It or Bag It Math</i> 	<p>Assessments/evidence, also see pages 1-2</p> <p><u>REQUIRED LOCAL ASSESMENTS</u></p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT (EDM and Problem Solver) • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p><u>SUGGESTED ASSESSMENTS</u></p> <p>Anecdotal record (e.g. defends</p>

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		<p>2.8.3 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> • Stick Math #22 	<p>approach to instruction</p> <ul style="list-style-type: none"> • integrating content with other core subjects • using appropriate technology • using frequent assessment to modify instruction • modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> ▪ tiered assignments ▪ jigsawing ▪ pre/post assessments ▪ anchoring ▪ think/pair/share ▪ cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring • predicting • making connections • determining importance • synthesizing 	<ul style="list-style-type: none"> • <i>Teaching Children Mathematics</i>, NCTM • <i>Comprehensive Math Assessment</i>, Options Pub., Inc. <p><u>Technology</u></p> <ul style="list-style-type: none"> • Scientific calculator • Overhead calculator • Computer lab • www.rido.net • www.rido.net/curriculum • NECAP Release tasks • NECompact.org • SCHOOL Resource Folder • Geometers Sketch Pad <p><u>Materials</u></p> <ul style="list-style-type: none"> • Unifix cubes • 3D-solids • Rulers (metric), protractors <p><u>School library resources</u></p> <ul style="list-style-type: none"> • Donald in Mathmagic Land - video • Classroom Instruction That Works, Marzano • Math Who Needs It? (video) <p><u>Community</u></p>	<p>student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

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<p>3. FUNCTIONS AND ALGEBRA</p> <p>3.1 Variety of patterns</p>		<p>The student</p> <p>3.1.1 Identifies and extends to specific cases a variety of patterns (linear, and non-numeric) (non-linear (D)), represented in models, tables, or sequences by</p> <ul style="list-style-type: none"> extending the pattern to the next one, <u>two</u>, or <u>three elements</u>, or finding missing elements. M(F&A)-3-1 (state assessment) <p>3.1.2 Writes rule in words or^{sc} symbols to find the next case. (D) M(F&A)-4-1</p> <ul style="list-style-type: none"> day *2= # of seeds 2D=S (symbols) <p>3.1.3 Understands, uses, applies appropriate technology to solve problems.</p> <p>3.1.4 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> Sally's Party #38 Triangular Tables #39 Staircase #40 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> using manipulatives facilitating cooperative group work discussing mathematics questioning and making conjectures justifying of thinking constructing written responses defending the student's mathematics facilitating problem solving approach to instruction integrating content with other core subjects using appropriate technology using frequent assessment to modify instruction modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> tiered assignments jigsawing pre/post assessments anchoring think/pair/share cubing, etc. 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 3</i> Units 2, 4, 7, & 9</p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> Hands-on Algebra <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde Mathematics Books by Marilyn Burns <i>Exemplars</i> <i>Problem Solvers</i> Box It or Bag It Math <i>Teaching Children Mathematics</i>, NCTM <i>Comprehensive Math Assessment</i>, Options Pub., Inc. <p><u>Technology</u></p> <ul style="list-style-type: none"> Scientific calculator Overhead calculator Computer lab www.ridoe.net www.ridoe.net/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder <p><u>Materials</u></p> <ul style="list-style-type: none"> Pattern tiles Unifix cubes Rulers (metric) 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> MID-YEAR ASSESSMENT (EDM and Problem Solver) END-OF-YEAR ASSESSMENT (EDM and Problem Solver) PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

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			<p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring • predicting • making connections • determining importance • synthesizing 	<ul style="list-style-type: none"> • Pan balances <p><u>School library resources</u></p> <ul style="list-style-type: none"> • <i>Classroom Instruction That Works</i>, Marzano <p><u>Community</u></p>	
<p>3. FUNCTIONS AND ALGEBRA</p> <p>3.2 Linear relationships</p>		<p>The student</p> <p>3.2.1 Begins to demonstrate conceptual understanding of linear relationships ($y=kx$) as a constant rate of change by</p> <ul style="list-style-type: none"> • identifying • describing <ul style="list-style-type: none"> ○ faster ○ slower ○ greater ○ smaller • comparing <p>situations that represent constant rates of change (e.g., tell a story given a line graph about a trip). (B) M(F&A)-4-2</p> <p>3.2.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>3.2.3 REQUIRED PROBLEMS</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> • using manipulatives • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving approach to instruction • integrating content with other core subjects • using appropriate technology • using frequent assessment 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 3</i> Unit 9</p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> • Mathematics Books by Marilyn Burns • Exemplars • Problem Solvers • Box It or Bag It Math • <i>Teaching Children Mathematics</i>, NCTM • <i>Comprehensive Math Assessment</i>, Options Pub., Inc <p><u>Technology</u></p> <ul style="list-style-type: none"> • Scientific calculator • Overhead calculator • Computer lab 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT (EDM and Problem Solver) • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS • EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p>

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		<ul style="list-style-type: none"> Two Chicken Farmers #41 Halloween Candy #42 Flying South #43 	<p>to modify instruction</p> <ul style="list-style-type: none"> modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> tiered assignments jigsawing pre/post assessments anchoring think/pair/share cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> K-W-L visualizing asking strategies inferring predicting making connections determining importance synthesizing 	<ul style="list-style-type: none"> www.rido.net www.rido.net/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder <p><u>Materials</u></p> <ul style="list-style-type: none"> Pattern tiles Unifix cubes Rulers (metric) Pan balances Graphing paper <p><u>School library resources</u></p> <ul style="list-style-type: none"> <i>Classroom Instruction That Works</i>, Marzano <p><u>Community</u></p>	<p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>3. FUNCTIONS AND ALGEBRA</p> <p>3.3 Algebraic expressions</p>		<p>The student</p> <p>3.3.1 Demonstrates conceptual understanding of algebraic expressions by</p> <ul style="list-style-type: none"> using letters or symbols to represent unknown quantities to write simple linear algebraic expressions involving any one of the four operations . (D)M(F&A)-4-3 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> using manipulatives facilitating cooperative group work discussing mathematics 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 3</i> Units 2, 4, 7, & 9</p> <p><u>Supplementary books/materials</u></p>	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESMENTS</p> <ul style="list-style-type: none"> MID-YEAR ASSESSMENT (EDM and Problem Solver) END-OF-YEAR

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Curriculum Writers: Adela Felag and Laura Butler

STANDARDS GLEs	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT/ EVIDENCE
		<ul style="list-style-type: none"> evaluating simple linear algebraic expressions using whole numbers. (D) M(F&A)-4-3 e.g. determine the value of y when given $6 = y + 2$ <p>3.3.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>3.3.3 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> Hands-on Algebra 	<ul style="list-style-type: none"> questioning and making conjectures justifying of thinking constructing written responses defending the student's mathematics facilitating problem solving approach to instruction integrating content with other core subjects using appropriate technology using frequent assessment to modify instruction modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> tiered assignments jigsawing pre/post assessments anchoring think/pair/share cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> K-W-L visualizing asking strategies inferring predicting making connections 	<ul style="list-style-type: none"> <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde Mathematics Books by Marilyn Burns <i>Exemplars</i> <i>Problem Solvers</i> Box It or Bag It Math <i>Teaching Children Mathematics</i>, NCTM <i>Comprehensive Math Assessment</i>, Options Pub., Inc <p>Technology</p> <ul style="list-style-type: none"> Scientific calculator Overhead calculator Computer lab www.ridoe.net www.ridoe.net/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder <p>Materials</p> <ul style="list-style-type: none"> Pattern tiles Unifix cubes Rulers (metric) Pan balances Graphing paper <p>School library resources</p> <ul style="list-style-type: none"> <i>Classroom Instruction That Works</i>, Marzano <p>Community</p>	<p>ASSESSMENT (EDM and Problem Solver)</p> <ul style="list-style-type: none"> PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

Mathematics Grade 3

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STANDARDS GLEs	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT/ EVIDENCE
			<ul style="list-style-type: none"> determining importance synthesizing 		
<p>3. FUNCTIONS AND ALGEBRA</p> <p>3.4 Equality</p>		<p>The student</p> <p>3.4.1 Demonstrates conceptual understanding of equality by</p> <ul style="list-style-type: none"> showing equivalence between two expressions using models or different representations of the expressions finding the value that will make an open sentence true (e.g., $2+w=7$). (limited to one operation and limited to use addition, subtraction, or multiplication) M(F&A)-3-4 (state assessment) simplifying numerical expressions where left to right computations may be modified only by the use of parentheses [e.g., $14 - (2 \times 5)$] (expressions consistent with the parameters of (D) M(F&A)-4-3) solving one-step linear equations of the form $ax = c$, $x \pm b = c$, where a, b, and c are whole numbers with $a \neq 0$. (D) M(F&A)-4-4 e.g. <ul style="list-style-type: none"> $ax=c$ ($3x=24$; $x=8$) $x+b=c$ ($x+5=20$; $x=15$) $x-b=c$ ($x-5=20$; $x=25$) <p>3.4.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>3.4.3 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> Hands-on Algebra 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> using manipulatives facilitating cooperative group work discussing mathematics questioning and making conjectures justifying of thinking constructing written responses defending the student's mathematics facilitating problem solving approach to instruction integrating content with other core subjects using appropriate technology using frequent assessment to modify instruction modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> tiered assignments jigsawing pre/post assessments 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 3</i> Units 2, 4, 5, 7, & 9</p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde Mathematics Books by Marilyn Burns Exemplars Problem Solvers Box It or Bag It Math Teaching Children Mathematics, NCTM Comprehensive Math Assessment, Options Pub., Inc <p><u>Technology</u></p> <ul style="list-style-type: none"> Scientific calculator Overhead calculator Computer lab www.ride.net www.ride.ri.gov/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder <p><u>Materials</u></p>	<p>Assessments/evidence, also see pages 1-2</p> <p><u>REQUIRED LOCAL ASSESSMENTS</u></p> <ul style="list-style-type: none"> MID-YEAR ASSESSMENT (EDM and Problem Solver) END-OF-YEAR ASSESSMENT (EDM and Problem Solver) PRE AND POST EDM/GLE UNIT TESTS <p><u>SUGGESTED ASSESSMENTS</u></p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p>

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			<ul style="list-style-type: none"> ▪ anchoring ▪ think/pair/share ▪ cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring • predicting • making connections • determining importance • synthesizing 	<ul style="list-style-type: none"> • Pattern tiles • Unifix cubes • Rulers (metric) • Pan balances • Graphing paper <p><u>School library resources</u></p> <ul style="list-style-type: none"> • Classroom Instruction That Works, Marzano <p><u>Community</u></p>	<p>Visual representation (e.g. Power Point™)</p>
<p>4. DATA, STATISTICS, AND PROBABILITY</p> <p>4.1 Given representation</p>		<p>The student</p> <p>4.1.1 Interprets a given representation (line plots, tally charts, tables, <u>bar graphs</u>) and (<u>pictographs/circle graph (D)</u>) to</p> <ul style="list-style-type: none"> • answer questions related to the data, to analyze the data to formulate conclusions, • <u>make predictions</u>. M(DSP)-3-1 (state assessment) ▪ <u>justify conclusions and solve problems (D)</u> M (DESP)-4-1 <p>(IMPORTANT: <i>Analyzes data consistent with concepts and skills in M (DSP)-3-2.</i>)</p> <p>4.1.2 <u>Understands, uses, applies appropriate technology to solve problems</u></p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> • using manipulatives • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving approach to instruction • integrating content with other core subjects 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 3</i> Units 1, 10, & 11</p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> • <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde • <i>Mathematics Books by Marilyn Burns Exemplars</i> • <i>Problem Solvers</i> • <i>Box It or Bag It Math</i> • <i>Teaching Children Mathematics</i>, NCTM • <i>Comprehensive Math</i> 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT (EDM and Problem Solver) • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS Anecdotal record (e.g. defends student generated conjectures in class)</p>

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		<p>4.1.3 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> School Lunches #44 Favorite Summer Activities #45 Martin's Street Signs #46 	<ul style="list-style-type: none"> using appropriate technology using frequent assessment to modify instruction modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> tiered assignments jigsawing pre/post assessments anchoring think/pair/share cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> K-W-L visualizing asking strategies inferring predicting making connections determining importance synthesizing 	<p><i>Assessment, Options Pub., Inc</i></p> <p>Technology</p> <ul style="list-style-type: none"> Scientific calculator Overhead calculator Computer lab www.ridoe.net www.ride.ri.gov/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder <p>Materials</p> <ul style="list-style-type: none"> Dice Spinners Two-colored Chips Graphing paper <p>School library resources</p> <ul style="list-style-type: none"> <i>Classroom Instruction That Works, Marzano</i> <p>Community</p>	<p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>4. DATA, STATISTICS, AND PROBABILITY</p> <p>4.2 Patterns, trends,</p>		<p>The student</p> <p>4.2.1 Analyzes patterns, trends, or distributions in data in a variety of contexts by determining or using</p> <ul style="list-style-type: none"> most frequent (mode) 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> using manipulatives facilitating cooperative 	<p>Resources, also see pages 1-2</p> <p>Textbook <i>Everyday Mathematics Grade 3</i> Units 1 & 10</p>	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> MID-YEAR ASSESSMENT

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distributions		<ul style="list-style-type: none"> • <u>least frequent, largest, or smallest.</u> M(DSP)-3-2 (state assessment) • measures of central tendency (D) • median (D) • mode (D) • range. (D) M(DSP)-4-2 <p>4.2.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>4.2.3 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> • School Lunches #44 • Peanuts #47 	<p>group work</p> <ul style="list-style-type: none"> • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving approach to instruction • integrating content with other core subjects • using appropriate technology • using frequent assessment to modify instruction • modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> ▪ tiered assignments ▪ jigsawing ▪ pre/post assessments ▪ anchoring ▪ think/pair/share ▪ cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring 	<p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> • <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde • Mathematics Books by Marilyn Burns • <i>Exemplars</i> • <i>Problem Solvers</i> • Box It or Bag It Math • <i>Teaching Children Mathematics</i>, NCTM • <i>Comprehensive Math Assessment</i>, Options Pub., Inc <p><u>Technology</u></p> <ul style="list-style-type: none"> • Scientific calculator • Overhead calculator • Computer lab • www.ridee.net • www.ride.ri.gov/instruction/curriculum • NECAP Release tasks • NECompact.org • SCHOOL Resource Folder <p><u>Materials</u></p> <ul style="list-style-type: none"> • Dice • Spinners • Two-colored Chips • Graphing paper <p><u>School library resources</u></p> <ul style="list-style-type: none"> • <i>Classroom Instruction That Works</i>, Marzano <p><u>Community</u></p>	<p>(EDM and Problem Solver)</p> <ul style="list-style-type: none"> • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p><u>SUGGESTED ASSESSMENTS</u></p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

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			<ul style="list-style-type: none"> • predicting • making connections • determining importance • synthesizing 		
<p>4. DATA, STATISTICS, AND PROBABILITY</p> <p>4.3 Organizes and displays data</p>		<p>The student</p> <p>4.3.1 Organizes and displays data using tables, tally charts, and bar graphs, (line plots, pictographs (D) to</p> <ul style="list-style-type: none"> • answer questions related to the data • analyze the data to <ul style="list-style-type: none"> ◦ formulate (or justify (D)) conclusions ◦ make predictions ◦ solve problems. M(DSP)-3-3 <p>IMPORTANT: Analyzes data consistent with concepts and skills in M(DSP)-4-2.)</p> <p>4.3.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>4.3.3 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> • Pet Survey #56 • Favorite Pie #57 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> • using manipulatives • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving approach to instruction • integrating content with other core subjects • using appropriate technology • using frequent assessment to modify instruction • modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 3</i> Units 10 & 11</p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> • <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde • <i>Mathematics Books</i> by Marilyn Burns • <i>Exemplars</i> • <i>Problem Solvers</i> • <i>Box It or Bag It Math</i> • <i>Teaching Children Mathematics</i>, NCTM • <i>Comprehensive Math Assessment</i>, Options Pub., Inc <p><u>Technology</u></p> <ul style="list-style-type: none"> • Calculator • Overhead calculator • Computer lab • www.ridoe.net • www.ridoe.net/instruction/curriculum • <i>NECAP Release tasks</i> • NECompact.org 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT (EDM and Problem Solver) • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p>

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			<ul style="list-style-type: none"> ▪ tiered assignments ▪ jigsawing ▪ pre/post assessments ▪ anchoring ▪ think/pair/share ▪ cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring • predicting • making connections • determining importance • synthesizing 	<ul style="list-style-type: none"> • SCHOOL Resource Folder <p><u>Materials</u></p> <ul style="list-style-type: none"> • Dice • Spinners • Two-colored Chips • Graphing paper <p><u>School library resources</u></p> <ul style="list-style-type: none"> • Classroom Instruction That Works, Marzano <p><u>Community</u></p>	<p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>4. DATA, STATISTICS, AND PROBABILITY</p> <p>4.4. Representations or elements</p>		<p>The student</p> <p>4.4.1 Identifies or describes representations or elements of representations that best display a given set of data or situation, consistent with the representations required in M(DSP)-3-1. M(DSP)-3-3 (state assessment)</p> <p>(IMPORTANT: Analyzes data consistent with concepts and skills in M(DSP)-3-2.)</p> <p>4.4.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>4.4.3 REQUIRED PROBLEMS</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> • using manipulatives • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> Everyday Mathematics Grade 3 Units 10 & 11</p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> • Comprehending Math: Adapting Reading Strategies to Teach Math, K-6, Arthur Hyde • Mathematics Books by Marilyn Burns • Exemplars • Problem Solvers • Box It or Bag It 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESMENTS</p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT (EDM and Problem Solver) • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS Anecdotal record (e.g. defends</p>

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			<p>approach to instruction</p> <ul style="list-style-type: none"> • integrating content with other core subjects • using appropriate technology • using frequent assessment to modify instruction • modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> ▪ tiered assignments ▪ jigsawing ▪ pre/post assessments ▪ anchoring ▪ think/pair/share ▪ cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring • predicting • making connections • determining importance • synthesizing 	<p><u>Math</u></p> <ul style="list-style-type: none"> • Teaching Children Mathematics, NCTM • Comprehensive Math Assessment, Options Pub., Inc <p><u>Technology</u></p> <ul style="list-style-type: none"> • calculator • Overhead calculator • Computer lab • www.glencoe.com • www.rido.net • www.ride.ri.gov/instruction/curriculum • NECAP Release tasks • NECompact.org • SCHOOL Resource Folder <p><u>Materials</u></p> <ul style="list-style-type: none"> • Dice • Spinners • Two-colored Chips • Graphing paper <p><u>School library resources</u></p> <ul style="list-style-type: none"> • Classroom Instruction That Works, Marzano <p><u>Community</u></p>	<p>student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

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<p>4. DATA, STATISTICS, AND PROBABILITY</p> <p>4.5 Counting techniques</p>		<p>The student</p> <p>4.5.1 Uses counting techniques to solve problems involving combinations and simple permutations e.g., given 3 digits (4,7,9) what are all the possible combinations that can be made, 479, 497, 749...) using a variety of strategies</p> <ul style="list-style-type: none"> student diagrams organized lists tables tree diagrams, or^{sc} others). M(DSP)-3-4 <p>4.5.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>4.5.3 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> Wild Turkey #49 T-shirts and Jeans #50 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> using manipulatives facilitating cooperative group work discussing mathematics questioning and making conjectures justifying of thinking constructing written responses defending the student's mathematics facilitating problem solving approach to instruction integrating content with other core subjects using appropriate technology using frequent assessment to modify instruction modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> tiered assignments jigsawing pre/post assessments anchoring think/pair/share cubing, etc. 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 3</i> Units 10 & 11</p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde Mathematics Books by Marilyn Burns Exemplars Problem Solvers Box It or Bag It Math <i>Teaching Children Mathematics</i>, NCTM <i>Comprehensive Math Assessment</i>, Options Pub., Inc <p><u>Technology</u></p> <ul style="list-style-type: none"> Calculator Overhead calculator Computer lab www.ridee.net www.ride.ri.gov/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder <p><u>Materials</u></p> <ul style="list-style-type: none"> Dice Spinners Two-colored Chips Graphing paper 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> MID-YEAR ASSESSMENT (EDM and Problem Solver) END-OF-YEAR ASSESSMENT (EDM and Problem Solver) PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

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STANDARDS GLEs	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT/ EVIDENCE
			Reading strategies to teach mathematics (Hyde) <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring • predicting • making connections • determining importance • synthesizing 	<u>School library resources</u> <ul style="list-style-type: none"> • <i>Classroom Instruction That Works</i>, Marzano <u>Community</u>	
4. DATA, STATISTICS, AND PROBABILITY 4.6 Probability event		<p>The student</p> <p>4.6.1 For a probability event in which the sample space may or may not contain equally likely outcomes,</p> <ul style="list-style-type: none"> • predicts the likelihood of an event <ul style="list-style-type: none"> ○ using "more likely," "less likely," "equally likely," certain, or impossible and tests the prediction through experiments; ○ determines if a game is fair. M(DSP)-3-5 ○ as a part to whole relationship (e.g., two out of five, zero out of five, five out of five) (D) M(DSP)-4-5 <p>4.6.2 For a probability event in which the sample space may or may not contain equally likely outcomes, determines</p> <ul style="list-style-type: none"> • the likelihood of the occurrence of event 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> • using manipulatives • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving approach to instruction • integrating content with other core subjects • using appropriate technology • using frequent assessment to modify instruction 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 3 Unit 11</i></p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> • <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde • Mathematics Books by Marilyn Burns • <i>Exemplars</i> • <i>Problem Solvers</i> • <i>Box It or Bag It Math</i> • <i>Teaching Children Mathematics</i>, NCTM • <i>Comprehensive Math Assessment</i>, Options Pub., Inc 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT (EDM and Problem Solver) • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p>

Mathematics Grade 3

Curriculum Writers: Adela Felag and Laura Butler

STANDARDS GLEs	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT/ EVIDENCE
		<p>(using "more likely," less likely," or equally likely") M(DSP)-3-5 state assessment</p> <ul style="list-style-type: none"> theoretical probability of an event and expresses the result as part to whole (e.g. two out of five) (D) M(DSP)-4-5 <p>4.6.3 Understands, uses, applies appropriate technology to solve problems.</p> <p>4.6.4 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> Roll 2 Number Cubes #51 Dice Game #52 	<ul style="list-style-type: none"> modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> tiered assignments jigsawing pre/post assessments anchoring think/pair/share cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> K-W-L visualizing asking strategies inferring predicting making connections determining importance synthesizing 	<p>Technology</p> <ul style="list-style-type: none"> Calculator Overhead calculator Computer lab www.ridoe.net www.ride.ri.gov/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder <p>Materials</p> <ul style="list-style-type: none"> Dice Spinners Two-colored Chips Graphing paper <p>School library resources</p> <ul style="list-style-type: none"> <i>Classroom Instruction That Works</i>, Marzano <p>Community</p>	<p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>4. DATA, STATISTICS, AND PROBABILITY</p> <p>4.7 Experimental or theoretical probability</p>		<p>The student</p> <p>4.7.1 In response to a teacher or student generated question or hypothesis, groups</p> <ul style="list-style-type: none"> decide the most effective method (e.g., survey, observation, experimentation) to collect the data (numerical or categorical) necessary to answer the question; collects, organizes, and appropriately 	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> using manipulatives facilitating cooperative group work discussing mathematics questioning and making 	<p>Resources, also see pages 1-2</p> <p>Textbook</p> <p><i>Everyday Mathematics Grade 3</i></p> <p>Units 10 & 11 Supplementary books/materials</p> <ul style="list-style-type: none"> <i>Comprehending Math: Adapting Reading</i> 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> MID-YEAR ASSESSMENT (EDM and Problem Solver) END-OF-YEAR ASSESSMENT (EDM and Problem Solver)

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		<p>displays the data;</p> <ul style="list-style-type: none"> analyzes the data to draw conclusions about the question or hypothesis being tested, and when appropriate makes predictions. M(DSP)-3-6 ask new questions and makes connections to real world situations. (D) M(DSP)-4-6 <p>IMPORTANT: <i>Analyzes data consistent with concepts and skills in M(DSP)-3-2.)</i></p> <p>4.7.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>4.7.3 REQUIRED PROBLEMS</p> <ul style="list-style-type: none"> Socks #54 M & M Candies #55 Pet Survey #56 Favorite Pie #57 Watching Television #58 	<p>conjectures</p> <ul style="list-style-type: none"> justifying of thinking constructing written responses defending the student's mathematics facilitating problem solving approach to instruction integrating content with other core subjects using appropriate technology using frequent assessment to modify instruction modeling functions of a calculator <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> tiered assignments jigsawing pre/post assessments anchoring think/pair/share cubing, etc. <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> K-W-L visualizing asking strategies inferring predicting making connections determining importance 	<p><i>Strategies to Teach Math, K-6, Arthur Hyde</i></p> <ul style="list-style-type: none"> Mathematics Books by Marilyn Burns Exemplars Problem Solvers Box It or Bag It Math Teaching Children Mathematics, NCTM Comprehensive Math Assessment, Options Pub., Inc <p>Technology</p> <ul style="list-style-type: none"> Calculator Overhead calculator Computer lab www.glencoe.com www.ridoe.net www.ridoe.net/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder <p>Materials</p> <ul style="list-style-type: none"> Dice Spinners Two-colored Chips Graphing paper <p>School library resources</p> <ul style="list-style-type: none"> <i>Classroom Instruction That Works, Marzano</i> <p>Community</p>	<ul style="list-style-type: none"> PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

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STANDARDS GLEs	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT/ EVIDENCE
			<ul style="list-style-type: none"> synthesizing 		
<p>5. PROBLEM SOLVING, REASONING, AND PROOF</p> <p>5.1 Problem Solving strategies</p>		<p>The student will use problem-solving strategies to investigate and understand increasingly complex mathematical content and be able to:</p> <p>:</p> <p>5.1.1 Determine the reasonableness of solutions to real world problems.</p> <p>5.1.2 Generalize solutions and apply strategies to new problem situations.</p> <p>5.1.3 Add to the repertoire of problem-solving strategies (e.g., looking for similar problems) and use those strategies in more sophisticated ways.</p> <ul style="list-style-type: none"> identify the problem/question/task make a list create a diagram organize data determine a pattern identify and use formulas when appropriate begin to create algebraic representation use technology when appropriate to solve problems <p>5.1.4 Solve problems with multiple solutions, recognize when a problem has no solution, and recognize problems where more information is needed.</p> <p>5.1.5 Translate results of a computation into solutions that fit the real-world problem (e.g., when computation shows that one needs 3.2 gallons of</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> using manipulatives facilitating cooperative group work discussing mathematics questioning and making conjectures justifying of thinking constructing written responses defending the student's mathematics facilitating problem solving approach to instruction integrating content with other core subjects using appropriate technology using frequent assessment to modify instruction modeling functions of a calculator <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> K-W-L visualizing asking strategies inferring predicting 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> Everyday Mathematics Grade 3 <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> Comprehending Math: Adapting Reading Strategies to Teach Math, K-6, Arthur Hyde Mathematics Books by Marilyn Burns Exemplars Problem Solvers Box It or Bag It Math Teaching Children Mathematics, NCTM Comprehensive Math Assessment, Options Pub., Inc <p><u>Technology</u></p> <ul style="list-style-type: none"> Calculator Overhead calculator Computer lab www.ridoe.net www.ridoe.net/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder <p><u>Materials</u></p> <ul style="list-style-type: none"> Unifix cubes 3D-solids Rulers (metric), protractors 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> MID-YEAR ASSESSMENT (EDM and Problem Solver) END-OF-YEAR ASSESSMENT (EDM and Problem Solver) PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p>

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		paint to paint a room, how much paint do you buy?).	<ul style="list-style-type: none"> making connections determining importance synthesizing 	<u>School library resources</u> <ul style="list-style-type: none"> <i>Classroom Instruction That Works</i>, Marzano <u>Community</u>	Visual representation (e.g. Power Point™)
5. PROBLEM SOLVING, REASONING, AND PROOF 5.2 Mathematical reasoning and proof		<p>The student will use mathematical reasoning and proof and be able to:</p> <p>5.2.1 Draw conclusions and solve problems using elementary deductive reasoning and reasoning by analogy.</p> <p>5.2.1 Make and defend conjectures and generalizations. <i>from:</i></p> <ul style="list-style-type: none"> patterns graphs tables <p>5.2.2 Use models, known facts, properties, and relationships to explain thinking and to justify answers and solution processes.</p> <p>5.2.3 Recognize the pervasive use and power of reasoning as a part of mathematics. M(PRP)-5-2</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> using manipulatives facilitating cooperative group work discussing mathematics questioning and making conjectures justifying of thinking constructing written responses defending the student's mathematics facilitating problem solving approach to instruction integrating content with other core subjects using appropriate technology using frequent assessment to modify instruction modeling functions of a calculator <p>Rading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> K-W-L 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <i>Everyday Mathematics Grade 3</i> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde Mathematics Books by Marilyn Burns <i>Exemplars</i> <i>Problem Solvers</i> Box It or Bag It Math <i>Teaching Children Mathematics</i>, NCTM <i>Comprehensive Math Assessment</i>, Options Pub., Inc <p><u>Technology</u></p> <ul style="list-style-type: none"> Calculator Overhead calculator Computer lab www.ridoe.net www.ride.ri.gov/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESMENTS</p> <ul style="list-style-type: none"> MID-YEAR ASSESSMENT (EDM and Problem Solver) END-OF-YEAR ASSESSMENT (EDM and Problem Solver) PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p>

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			<ul style="list-style-type: none"> visualizing asking strategies inferring predicting making connections determining importance synthesizing 	<p><u>Materials</u></p> <ul style="list-style-type: none"> Unifix cubes 3D-solids Rulers (metric), protractors <p><u>School library resources</u></p> <ul style="list-style-type: none"> <i>Classroom Instruction That Works</i>, Marzano <p><u>Community</u></p>	<p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>6. COMMUNICATION, CONNECTIONS, AND REPRESENTATION</p> <p>6.1 Communicate understanding</p>		<p>The student will communicate their understanding of mathematics and be able to:</p> <p>6.1.1 Discuss mathematical ideas and write convincing arguments.</p> <p>6.1.2 Understand, explain, analyze, and evaluate mathematical arguments and conclusions presented by others.</p> <p>6.1.3 Ask clarifying and extending questions related to mathematics they have heard or read about.</p> <p>6.1.4 Understand and appreciate the economy and power of mathematical symbolism and its role in the development of mathematics.</p> <p>6.1.5 Demonstrate an understanding of mathematical concepts and relationships through a variety of methods (e.g., writing, graphing, charts, diagrams, number sentences, or symbols).</p> <p>6.1.6 Use a variety of technologies (e.g., computers, calculators, video, probes) to represent and</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> using manipulatives facilitating cooperative group work discussing mathematics questioning and making conjectures justifying of thinking constructing written responses defending the student's mathematics facilitating problem solving approach to instruction integrating content with other core subjects using appropriate technology using frequent assessment to modify instruction modeling functions of a calculator 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <i>Everyday Mathematics Grade 3</i> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde Mathematics Books by Marilyn Burns <i>Exemplars</i> <i>Problem Solvers</i> <i>Box It or Bag It Math</i> <i>Teaching Children Mathematics</i>, NCTM <i>Comprehensive Math Assessment</i>, Options Pub., Inc <p><u>Technology</u></p> <ul style="list-style-type: none"> Calculator Overhead calculator Computer lab www.ridoe.net 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> MID-YEAR ASSESSMENT (EDM and Problem Solver) END-OF-YEAR ASSESSMENT (EDM and Problem Solver) PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p>

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		communicate mathematical ideas.	Reading strategies to teach mathematics (Hyde) <ul style="list-style-type: none"> • K-W-L • visualizing • asking strategies • inferring • predicting • making connections • determining importance • synthesizing 	<ul style="list-style-type: none"> • www.ride.ri.gov/instruction/curriculum • NECAP Release tasks • NECompact.org • SCHOOL Resource Folder <p><u>Materials</u></p> <ul style="list-style-type: none"> • Unifix cubes • 3D-solids • Rulers (metric), protractors <p><u>School library resources</u></p> <ul style="list-style-type: none"> • <i>Classroom Instruction That Works</i>, Marzano <p><u>Community</u></p>	Portfolio (samples of process and products) Rubrics Tests/ quizzes Visual representation (e.g. Power Point™)
6. COMMUNICATION, CONNECTIONS, AND REPRESENTATION 6.2 Create and use representations		<p>The student will create and use representations to communicate mathematical ideas and to solve problems and be able to:</p> <p>6.2.1 Use physical models and diagrams to represent important mathematical ideas (e.g. ,multiplication).</p> <p>6.2.2 Use appropriate representations to solve problems or to portray, clarify, or extend a mathematical idea, e.g.</p> <ul style="list-style-type: none"> • graphs • tables/charts • geometric representations <p>6.2.3 Recognize equivalent representations of concepts and procedures and translate among them as appropriate (for example, understand how the addition of whole numbers, fractions,</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> • using manipulatives • facilitating cooperative group work • discussing mathematics • questioning and making conjectures • justifying of thinking • constructing written responses defending the student's mathematics • facilitating problem solving approach to instruction • integrating content with other core subjects 	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> • <i>Everyday Mathematics Grade 3</i> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> • <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde • <i>Mathematics Books</i> by Marilyn Burns • <i>Exemplars</i> • <i>Problem Solvers</i> • <i>Box It or Bag It Math</i> • <i>Teaching Children Mathematics</i>, NCTM • <i>Comprehensive Math Assessment</i>, Options Pub., Inc 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> • MID-YEAR ASSESSMENT (EDM and Problem Solver) • END-OF-YEAR ASSESSMENT (EDM and Problem Solver) • PRE AND POST EDM/GLE UNIT TESTS <p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p>

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		and decimals are related).	<ul style="list-style-type: none"> using appropriate technology using frequent assessment to modify instruction modeling functions of a calculator <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> K-W-L visualizing asking strategies inferring predicting making connections determining importance synthesizing 	<p>Technology</p> <ul style="list-style-type: none"> Calculator Overhead calculator Computer lab www.ridoe.net www.ridoe.net/instruction/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder <p>Materials</p> <ul style="list-style-type: none"> Unifix cubes 3D-solids Rulers (metric), protractors <p>School library resources</p> <ul style="list-style-type: none"> <i>Classroom Instruction That Works</i>, Marzano <p>Community</p>	<p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>6. COMMUNICATION, CONNECTIONS, AND REPRESENTATION</p> <p>6.3 Mathematical connections</p>		<p>The student will recognize, explore, and develop mathematical connections and be able to:</p> <p>6.3.1 See mathematics as an integrated whole.</p> <p>6.3.2 Recognize relationships among different topics in mathematics.</p> <p>6.3.3 Recognize and use mathematics in other curriculum areas and in their daily lives.</p> <p>6.3.4 Link concepts and procedures.</p> <p>6.3.5 Use mathematical skills, concepts, and applications in other disciplines, e.g.</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> using manipulatives facilitating cooperative group work discussing mathematics questioning and making conjectures justifying of thinking constructing written responses defending the student's mathematics 	<p>Resources, also see pages 1-2</p> <p>Textbook</p> <ul style="list-style-type: none"> <i>Everyday Mathematics Grade 3</i> <p>Supplementary books</p> <ul style="list-style-type: none"> <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde <i>Mathematics Books</i> by Marilyn Burns <i>Exemplars</i> <i>Problem Solvers</i> <i>Box It or Bag It Math</i> 	<p>Assessments/evidence, also see pages 1-2</p> <p>REQUIRED LOCAL ASSESSMENTS</p> <ul style="list-style-type: none"> MID-YEAR ASSESSMENT (EDM and Problem Solver) END-OF-YEAR ASSESSMENT (EDM and Problem Solver) PRE AND POST EDM/GLE UNIT TESTS

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		<ul style="list-style-type: none"> graphs in social studies patterns in art music and geometry in technology 	<ul style="list-style-type: none"> facilitating problem solving approach to instruction integrating content with other core subjects using appropriate technology using frequent assessment to modify instruction modeling functions of a calculator <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> K-W-L visualizing asking strategies inferring predicting making connections determining importance synthesizing 	<ul style="list-style-type: none"> <i>Teaching Children Mathematics</i>, NCTM <i>Comprehensive Math Assessment</i>, Options Pub., Inc <p><u>Technology</u></p> <ul style="list-style-type: none"> Calculator Overhead calculator Computer lab www.ridoe.net www.ridoe.net/education/curriculum NECAP Release tasks NECompact.org SCHOOL Resource Folder <p><u>Materials</u></p> <ul style="list-style-type: none"> Unifix cubes 3D-solids Rulers (metric), protractors <p><u>School library resources</u></p> <ul style="list-style-type: none"> <i>Classroom Instruction That Works</i>, Marzano <p><u>Community</u></p>	<p>SUGGESTED ASSESSMENTS</p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p> <p>Visual representation (e.g. Power Point™)</p>