

# Mathematics Grade 2

Curriculum Writers: Adela Felag and Jessika Garcia

STANDARDS GLEs	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT/ EVIDENCE
<p><b>CONTENT STRANDS</b></p> <ul style="list-style-type: none"> <li>Number and Operations</li> <li>Geometry and Measurement</li> <li>Functions and Algebra</li> <li>Data, Statistics, and Probability</li> </ul> <p><b>PROCESS STRANDS</b></p> <ul style="list-style-type: none"> <li>Problem-solving, Reasoning, and Proof</li> <li>Communication, Connections, and</li> </ul>		<p><b>NECAP GRADE LEVEL EXPECTATIONS</b></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 <b>(state assessment, grade...)</b>.</p> <p>Each GLE includes three parts:</p> <ul style="list-style-type: none"> <li>A statement in <b>bold</b>, 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.</li> <li>The <b>unbolded</b> 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</li> <li>Differences between adjacent grades are <b>underlined</b>. Sometimes nothing is underlined within a GLE. In these situations, differences in adjacent grades "assumes increasing text complexity" and is noted for those GLEs.</li> <li>Each GLE is <b>coded</b> for the content area, the grade level, the GLE "stem" number, and specific indicator for that GLE stem, (e.g. N&amp;O - 5-6.2) means N &amp; O (numbers</li> </ul>	<p><b>DISTRICT INITIATIVES &amp; RESEARCH</b></p> <p><b>The teacher</b> 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 <b>Applied Learning Standards (SCANS)</b></p> <ul style="list-style-type: none"> <li>critical thinking</li> <li>problem solving</li> <li>research</li> <li>communication</li> <li>reflection and evaluation</li> </ul> <p>Applies <b>Principles of Learning (POL)</b> ©</p> <ul style="list-style-type: none"> <li>organizing for effort</li> <li>clear expectations</li> <li>fair and credible evaluations</li> <li>recognition of accomplishment</li> <li>academic rigor</li> <li>accountable talk</li> <li>socializing intelligence</li> <li>self-management of learning</li> <li>learning as apprenticeship</li> </ul> <p>Applies <b>Principles of Disciplinary Literacy</b></p> <p><b>Differentiates instruction by varying the content, process, and product</b> and implementing</p> <ul style="list-style-type: none"> <li>tiered assignments</li> <li>jigsawing</li> <li>pre/post assessments</li> <li>anchoring</li> <li>think/pair/share</li> <li>cubing, etc.</li> </ul> <p>Analyzes <b>pre-assessment</b> to direct instruction</p> <p>Provides <b>exemplars</b> and <b>rubrics</b></p> <p>Addresses multiple intelligences and brain</p>	<p><b>Textbook</b> <i>Everyday Mathematics Grade 2</i></p> <p><b>Supplementary books</b></p> <ul style="list-style-type: none"> <li><i>McGraw-Hill Mathematics</i></li> <li><i>Teacher Created Materials</i></li> <li><i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li><i>Mathematics Books by Marilyn Burns</i></li> <li><i>Exemplars</i></li> <li><i>Problem Solvers</i></li> <li><i>Box It or Bag It Math</i></li> <li><i>Teaching Children Mathematics</i>, NCTM</li> <li><i>Comprehensive Math Assessment, Options Pub., Inc</i></li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>Calculators</li> <li>Computer lab</li> <li><a href="http://www.ridee.net">www.ridee.net</a></li> <li><a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>SCHOOL Resource Folder</li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>Unifix cubes</li> <li>3D-solids</li> <li>Rulers (metric),</li> <li>Number lines</li> <li>Multiplication charts</li> <li>EDM cards</li> <li>EDM games</li> <li>Graphing paper</li> </ul>	<p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED</b></p> <p>Anecdotal records (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Exhibits</p> <p>Journals/notebooks</p> <p>Graphic organizers and/or visual imagery</p> <p><b>Multiple Intelligences assessments e.g.</b></p> <ul style="list-style-type: none"> <li>role playing, short plays (bodily kinesthetic)</li> <li>graphic organizing, sketch journals/ cartooning (visual)</li> <li>collaboration/ conferencing interpersonal</li> <li>songs, lyrics (musical)</li> </ul> <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><b>Representations</b></p>		<p>and operations), 5 (grade 5), 6 (6<sup>th</sup> GLE stem), 2 (the second specific indicator for the 6<sup>th</sup> 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><b>Outcomes and Benchmarks</b> are indicated for all <b>MATHEMATICS GLEs/standards</b> and are secured for this grade level unless indicated with a <b>B</b> for beginning or a <b>D</b> for developing.</p> <p>The <b>instructional strategies, resources, and assessments</b> 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 <b>exhibition of student work</b> with rubrics</p> <p>Collaborates with specialist to differentiate instruction for ALL students</p> <p><b>MATHEMATICS STRATEGIES</b></p> <p>Employs <b>Mathematics best practice strategies e.g.</b></p> <ul style="list-style-type: none"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving approach to instruction</li> <li>• integrating content with other core subjects</li> <li>• using appropriate technology</li> <li>• using frequent assessment to modify instruction</li> <li>• modeling functions of a calculator</li> </ul> <p>Adapts reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> </ul>	<p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>• <i>Classroom Instruction That Works, Marzano</i></li> </ul>	

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			<ul style="list-style-type: none"> <li>synthesizing</li> </ul>		
<p>1. NUMBER and OPERATIONS</p> <p>1.1 Rational numbers</p>		<p><b>The student</b></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"> <li>whole numbers from 0 to 199 (0-999) (B) through:               <ul style="list-style-type: none"> <li>equivalency e.g. <math>10 = 5+5</math></li> <li>composition e.g. <math>2+2+4=8</math></li> <li>decomposition e.g. <math>8 = 2+2+4</math></li> <li>place value e.g. seven hundred, thirty-nine</li> <li>expanded notation e.g. <math>134=100+30+4</math></li> </ul> </li> <li>positive fractional numbers benchmark fractions:               <ul style="list-style-type: none"> <li>halves, thirds, fourths (fifths, sixths, eighths, tenths) (D)</li> <li>as a part to whole relationship in area and sets where the number of parts in the whole is equal to the denominator M(N&amp;O)-2-1 1 (state assessment)</li> <li>linear models (B) e.g. number line, scales (temperature), and linear measurements</li> </ul> </li> </ul> <p>1.1.2 Understands, uses, applies appropriate technology to solve problems</p> <p>1.1.3 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>Calculator Expression # 1</li> <li>Turkey Talk #2</li> </ul>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>using manipulatives</li> <li>facilitating cooperative group work</li> <li>discussing mathematics</li> <li>questioning and making conjectures</li> <li>justifying of thinking</li> <li>constructing written responses defending the student's mathematics</li> <li>facilitating problem solving approach to instruction</li> <li>integrating content with other core subjects</li> <li>using appropriate technology</li> <li>using frequent assessment to modify instruction</li> <li>modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>tiered assignments</li> <li>jigsawing</li> <li>pre/post assessments</li> <li>anchoring</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 2</i></p> <ul style="list-style-type: none"> <li>Units 1,2,4,6,7,8</li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li><i>McGraw-Hill Mathematics</i></li> <li><i>Teacher Created Materials</i></li> <li><i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li><i>Mathematics Books by Marilyn Burns Exemplars</i></li> <li><i>Problem Solvers</i></li> <li><i>Box It or Bag It Math</i></li> <li><i>Teaching Children Mathematics</i>, NCTM</li> <li><i>Comprehensive Math Assessment</i>, Options Pub., Inc</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Calculators</li> <li>Computer lab</li> <li><a href="http://www.ridoe.net">www.ridoe.net</a></li> <li><a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>SCHOOL Resource Folder</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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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		<ul style="list-style-type: none"> <li>Fractional Parts #3</li> <li>Sharing Pizza #4</li> </ul>	<ul style="list-style-type: none"> <li>think/pair/share</li> <li>cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>K-W-L</li> <li>visualizing</li> <li>asking strategies</li> <li>inferring</li> <li>predicting</li> <li>making connections</li> <li>determining importance</li> <li>synthesizing</li> </ul>	<p><u>Materials</u></p> <ul style="list-style-type: none"> <li>Unifix cubes</li> <li>Rulers (metric),</li> <li>Number lines/grids</li> <li>EDM cards</li> <li>Cuisenaire rods</li> <li>dice</li> <li>Fact triangles</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li><i>Classroom Instruction That Works</i>, Marzano</li> </ul>	
<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 relative magnitude of numbers from 0 to 199 (0-999 <b>D</b>) by using models, number lines, and explanations and</p> <ul style="list-style-type: none"> <li>ordering whole numbers;</li> <li>comparing whole numbers to each other or to benchmark whole numbers (10, 25, 50, 75, 100, <u>125, 150, or 175</u>) (200, 250, 500, and 750 <b>D</b>)</li> <li>comparing whole numbers by using             <ul style="list-style-type: none"> <li>"1 more," "1 less"</li> <li>"10 more", "10 less"</li> <li>"100 more", or "100 less";</li> </ul> </li> <li>connecting number words and numerals to the quantities they represent M(N&amp;O)-2-2 (state <b>assessment</b>)</li> <li>comparing, identifying equivalent positive fractional numbers (halves, thirds, fourths) <b>D</b></li> </ul>	<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"> <li>using manipulatives</li> <li>facilitating cooperative group work</li> <li>discussing mathematics</li> <li>questioning and making conjectures</li> <li>justifying of thinking</li> <li>constructing written responses defending the student's mathematics</li> <li>facilitating problem solving approach to instruction</li> <li>integrating content with other core subjects</li> <li>using appropriate technology</li> <li>using frequent assessment</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <p><i>Everyday Mathematics Grade 2</i></p> <ul style="list-style-type: none"> <li>Units 2,4,6,8</li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li><i>McGraw-Hill Mathematics</i></li> <li><i>Teacher Created Materials</i></li> <li><i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li><i>Mathematics Books by Marilyn Burns</i></li> <li><i>Exemplars</i></li> <li><i>Problem Solvers</i></li> <li><i>Box It or Bag It Math</i></li> <li><i>Teaching Children</i></li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p>

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		<p>M(N&amp;O)-3-2</p> <p>1.2.2 Understands, uses, applies appropriate technology to solve problems</p> <p>1.2.3 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• The Number Lines # 5</li> <li>• Melanie's Markers # 6</li> <li>• Blocks #7</li> </ul>	<p>to modify instruction</p> <ul style="list-style-type: none"> <li>• modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>▪ tiered assignments</li> <li>▪ jigsawing</li> <li>▪ pre/post assessments</li> <li>▪ anchoring</li> <li>▪ think/pair/share</li> <li>▪ cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> <li>• synthesizing</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Mathematics, NCTM Comprehensive Math Assessment, Options Pub., Inc</i></li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>• Calculators</li> <li>• Computer lab</li> <li>• <a href="http://www.ridoe.net">www.ridoe.net</a></li> <li>• <a href="http://www.ridoe.net/instruction/curriculum">www.ridoe.net/instruction/curriculum</a></li> <li>• <b>NECAP Release tasks</b></li> <li>• <a href="http://NECompact.org">NECompact.org</a></li> <li>• <b>SCHOOL Resource Folder</b></li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>• Unifix cubes</li> <li>• Number lines/grids</li> <li>• EDM cards</li> <li>• EDM games</li> <li>• Cuisenaire rods</li> <li>• Dice</li> <li>• Fact triangles</li> </ul> <p><b>School library resources</b></p> <ul style="list-style-type: none"> <li>• <i>Classroom Instruction That Works, Marzano</i></li> <li>• Literature Link in School Resource Folder</li> </ul>	<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>1. NUMBER and OPERATIONS</p> <p>1.3 Operations</p>		<p>The student</p> <p>1.3.1 <b>Demonstrates conceptual understanding of mathematical operations (using models, number lines or explanations (D) by involving</b> addition and subtraction of whole numbers by solving problems involving:</p> <ul style="list-style-type: none"> <li>• joining actions (e.g. <math>23+74=</math>__)</li> </ul>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> </ul>	<p>Resources, also see pages 1-2</p> <p><b>Textbook</b></p> <p><i>Everyday Mathematics Grade 2</i></p> <ul style="list-style-type: none"> <li>• Units 2,4,6</li> </ul> <p><b>Supplementary books</b></p> <ul style="list-style-type: none"> <li>• <i>McGraw--Hill</i></li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• END-OF-YEAR</li> </ul>

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		<ul style="list-style-type: none"> <li>• separating actions (e.g. <math>74-23=</math> )</li> <li>• part-part whole relationships (e.g. <math>10=7+</math> , <math>3+7=</math> , or <math>10-3=</math> )</li> <li>• comparison situations (e.g. <math>39</math> <math>17+6+4</math>) (<math>&gt;</math>, <math>&lt;</math>, <math>=</math>)</li> <li>• addition of multiple one-digit whole numbers. M(N&amp;O)-2-3 (<b>state assessment</b>)</li> <li>• describing or illustrating the inverse relationship between addition and subtraction of whole numbers (D)               <ul style="list-style-type: none"> <li>◦ e.g. <math>5+3=8</math>; <math>8-3=5</math></li> </ul> </li> <li>• describing or illustrating the relationship between repeated addition and multiplication. (D)               <ul style="list-style-type: none"> <li>◦ e.g. <math>4+4+4=12</math>; <math>4 \times 3=12</math></li> <li><math>M(N&amp;O)-3-3</math></li> </ul> </li> </ul> <p>1.3.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>1.3.3 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• Toy Cars #8</li> <li>• Fill in the Blanks #9</li> </ul>	<ul style="list-style-type: none"> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving approach to instruction</li> <li>• integrating content with other core subjects</li> <li>• using appropriate technology</li> <li>• using frequent assessment to modify instruction</li> <li>• modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>▪ tiered assignments</li> <li>▪ jigsawing</li> <li>▪ pre/post assessments</li> <li>▪ anchoring</li> <li>▪ think/pair/share</li> <li>▪ cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> </ul>	<p><i>Mathematics Teacher Created Materials</i></p> <ul style="list-style-type: none"> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>• <i>Mathematics Books</i> by Marilyn Burns</li> <li>• <i>Exemplars</i></li> <li>• <i>Problem Solvers</i></li> <li>• Box It or Bag It Math</li> <li>• <i>Teaching Children Mathematics</i>, NCTM</li> <li>• <i>Comprehensive Math Assessment</i>, Options Pub., Inc</li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>• Calculators</li> <li>• Computer lab</li> <li>• <a href="http://www.ridee.net">www.ridee.net</a></li> <li>• <a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>• <b>NECAP Release tasks</b></li> <li>• <a href="http://NECompact.org">NECompact.org</a></li> <li>• <b>SCHOOL Resource Folder</b></li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>• Unifix cubes</li> <li>• Number lines/grids</li> <li>• EDM cards</li> <li>• EDM games</li> <li>• Dice</li> <li>• Fact triangles</li> </ul> <p><b>School library resources</b></p> <ul style="list-style-type: none"> <li>• <i>Classroom Instruction That Works</i>, Marzano</li> </ul>	<p><b>ASSESSMENT (EDM and Problem Solver)</b></p> <ul style="list-style-type: none"> <li>• <b>PRE AND POST EDM/GLE UNIT TESTS</b></li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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>

# Mathematics Grade 2

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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"> <li>determining importance</li> <li>synthesizing</li> </ul>		
<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"> <li>addition and subtraction with regrouping (D)</li> <li>the concept of multiplication (D)</li> </ul> <p>1.4.2 Understands, uses, applies appropriate technology to solve problems</p> <p>1.4.3 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>Pond Water #10</li> <li>Turtle Zoo #11</li> <li>Flower Petals #12</li> </ul>	<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"> <li>using manipulatives</li> <li>facilitating cooperative group work</li> <li>discussing mathematics</li> <li>questioning and making conjectures</li> <li>justifying of thinking</li> <li>constructing written responses defending the student's mathematics</li> <li>facilitating problem solving approach to instruction</li> <li>integrating content with other core subjects</li> <li>using appropriate technology</li> <li>using frequent assessment to modify instruction</li> <li>modeling functions of a calculator</li> </ul> <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></p> <p><i>Everyday Mathematics Grade 2</i></p> <ul style="list-style-type: none"> <li>Units 6,8,11,12</li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li><i>McGraw-Hill Mathematics</i></li> <li><i>Teacher Created Materials</i></li> <li><i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li><i>Mathematics Books by Marilyn Burns</i></li> <li><i>Exemplars</i></li> <li><i>Problem Solvers</i></li> <li><i>Box It or Bag It Math</i></li> <li><i>Teaching Children Mathematics</i>, NCTM</li> <li><i>Comprehensive Math Assessment</i>, Options Pub., Inc.</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Calculators</li> <li>Computer lab</li> <li><a href="http://www.ridoe.net">www.ridoe.net</a></li> <li><a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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>

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			<ul style="list-style-type: none"> <li>▪ tiered assignments</li> <li>▪ jigsawing</li> <li>▪ pre/post assessments</li> <li>▪ anchoring</li> <li>▪ think/pair/share</li> <li>▪ cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> <li>• synthesizing</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">NECAP Release tasks</a></li> <li>• <a href="#">NECompact.org</a></li> <li>• <a href="#">SCHOOL Resource Folder</a></li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>• Unifix cubes</li> <li>• Number lines/grids</li> <li>• Multiplication charts</li> <li>• EDM cards</li> <li>• EDM games</li> <li>• Base ten block</li> </ul> <p><b>School library resources</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Classroom Instruction That Works</a>, Marzano</li> </ul>	<p>Rubrics</p> <p>Tests/ quizzes</p>
<p>1. NUMBER and OPERATIONS</p> <p>1.5 Monetary</p>		<p><b>The student</b></p> <p>1.5.1 <b>Demonstrates understanding of monetary value by</b></p> <ul style="list-style-type: none"> <li>• <u>adding coins together to a value no greater than \$1.99 and representing the result in dollar notation;</u></li> <li>• <u>making change from \$1.00 or less</u></li> <li>• <u>recognizing equivalent coin representations of the same value (values up to \$1.99).</u> M(N&amp;O)-2-5 (state assessment)</li> <li>• <u>addition or subtraction of decimals (in the context of money).</u> (b) M(N&amp;O)-3-4</li> </ul> <p>1.5.2 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• Eggs # 13</li> </ul>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving</li> </ul>	<p>Resources, also see pages 1-2</p> <p><b>Textbook</b></p> <p><i>Everyday Mathematics Grade 2</i></p> <ul style="list-style-type: none"> <li>• Units 3,4,10,11</li> </ul> <p><b>Supplementary books</b></p> <ul style="list-style-type: none"> <li>• <i>McGraw--Hill Mathematics</i></li> <li>• <i>Teacher Created Materials</i></li> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>• <i>Mathematics Books by Marilyn Burns</i></li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></p> <p>Anecdotal record (e.g. defends</p>

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		<ul style="list-style-type: none"> <li>School Store # 14</li> </ul>	<p>approach to instruction</p> <ul style="list-style-type: none"> <li>integrating content with other core subjects</li> <li>using appropriate technology</li> <li>using frequent assessment to modify instruction</li> <li>modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>tiered assignments</li> <li>jigsawing</li> <li>pre/post assessments</li> <li>anchoring</li> <li>think/pair/share</li> <li>cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>K-W-L</li> <li>visualizing</li> <li>asking strategies</li> <li>inferring</li> <li>predicting</li> <li>making connections</li> <li>determining importance</li> <li>synthesizing</li> </ul>	<ul style="list-style-type: none"> <li>Exemplars</li> <li>Problem Solvers</li> <li>Box It or Bag It Math</li> <li>Teaching Children Mathematics, NCTM</li> <li>Comprehensive Math Assessment, Options Pub., Inc.</li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>Calculators</li> <li>Computer lab</li> <li><a href="http://www.ridoe.net">www.ridoe.net</a></li> <li><a href="http://www.ridoe.net/instruction/curriculum">www.ridoe.net/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>SCHOOL Resource Folder</li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>Unifix cubes</li> <li>Number lines/grids</li> <li>Multiplication charts</li> <li>EDM cards</li> <li>EDM games</li> <li>Base ten blocks</li> <li>Coins</li> </ul> <p><b>School library resources</b></p> <ul style="list-style-type: none"> <li>Classroom Instruction That Works, Marzano</li> </ul> <p><b>Community</b></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>
1. NUMBER and OPERATIONS		<p>The student</p> <p>1.6.1 Mentally</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p>	<p>Resources, also see pages 1-2</p>	<p>Assessments/evidence, also see pages 1-2</p>

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1.6 Mental calculations		<ul style="list-style-type: none"> <li>• adds and subtracts whole number facts <u>to a sum of 20 (through 20 (D))</u></li> <li>• names the number that is 10 more or less than the original number</li> <li>• adds and subtracts two digit multiples of ten (e.g., 60 + 80, 90 - 30). M(N&amp;O)-2-6</li> <li>• adds combinations of two-digit and three-digit whole numbers that are multiples of ten (e.g., 60 +50, 300 + 400, 320 + 90) (D)</li> <li>• subtracts a one-digit whole number from a two-digit whole number (e.g., 37 - 5 (D))</li> <li>• subtracts three-digit whole numbers that are multiples of one hundred (e.g., 500 - 200). (D) M(N&amp;O)-3-6</li> </ul> <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>1.6.2 Understands, uses, applies appropriate technology to solve problems</p> <p>1.6.3 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• Mad Minute (not included)</li> <li>• Slate Activities (mental math)</li> </ul>	<p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving approach to instruction</li> <li>• integrating content with other core subjects</li> <li>• using appropriate technology</li> <li>• using frequent assessment to modify instruction</li> <li>• modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>▪ tiered assignments</li> <li>▪ jigsawing</li> <li>▪ pre/post assessments</li> <li>▪ anchoring</li> <li>▪ think/pair/share</li> <li>▪ cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>• K-W-L</li> </ul>	<p><b>Textbook</b></p> <p><i>Everyday Mathematics Grade 2</i></p> <ul style="list-style-type: none"> <li>• Units 2,4,6,7</li> </ul> <p><b>Supplementary books</b></p> <ul style="list-style-type: none"> <li>• McGraw--Hill Mathematics</li> <li>• Teacher Created Materials</li> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>• Mathematics Books by Marilyn Burns</li> <li>• Exemplars</li> <li>• Problem Solvers</li> <li>• Box It or Bag It Math</li> <li>• <i>Teaching Children Mathematics</i>, NCTM</li> <li>• <i>Comprehensive Math Assessment</i>, Options Pub., Inc.</li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>• Calculators</li> <li>• Computer lab</li> <li>• <a href="http://www.ridoe.net">www.ridoe.net</a></li> <li>• <a href="http://www.ridoe.net/instruction/curriculum">www.ridoe.net/instruction/curriculum</a></li> <li>• NECAP Release tasks</li> <li>• NECompact.org</li> <li>• SCHOOL Resource Folder</li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>• Unifix cubes</li> <li>• 3D-solids</li> <li>• Number lines/grids</li> <li>• EDM cards</li> <li>• EDM games</li> <li>• Base ten blocks</li> </ul>	<p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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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			<ul style="list-style-type: none"> <li>visualizing</li> <li>asking strategies</li> <li>inferring</li> <li>predicting</li> <li>making connections</li> <li>determining importance</li> <li>synthesizing</li> </ul>	<p><u>School library resources</u></p> <ul style="list-style-type: none"> <li><i>Classroom Instruction That Works</i>, Marzano</li> </ul>	
<p>1. NUMBER and OPERATIONS</p> <p>1.7 Estimates</p>		<p>The student</p> <p>1.7.1 <b>Makes estimates</b> of the number of objects in a set (up to 50) by selecting an appropriate method of estimation. M(N&amp;O)-2-7</p> <ul style="list-style-type: none"> <li>identifying when estimation is appropriate (D) M(N&amp;O)-3-7</li> </ul> <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>1.7.2 Understands, uses, applies appropriate technology to solve problems</p> <p>1.7.3 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>Money Name #15</li> </ul>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>using manipulatives</li> <li>facilitating cooperative group work</li> <li>discussing mathematics</li> <li>questioning and making conjectures</li> <li>justifying of thinking</li> <li>constructing written responses defending the student's mathematics</li> <li>facilitating problem solving approach to instruction</li> <li>integrating content with other core subjects</li> <li>using appropriate technology</li> <li>using frequent assessment to modify instruction</li> <li>modeling functions of a calculator</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 2</i></p> <ul style="list-style-type: none"> <li>Units 4,6,10,11</li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li><i>McGraw-Hill Mathematics</i></li> <li><i>Teacher Created Materials</i></li> <li><i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li><i>Mathematics Books by Marilyn Burns</i></li> <li><i>Exemplars</i></li> <li><i>Problem Solvers</i></li> <li><i>Box It or Bag It Math</i></li> <li><i>Teaching Children Mathematics</i>, NCTM</li> <li><i>Comprehensive Math Assessment</i>, Options Pub., Inc.</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Calculators</li> <li>Computer lab</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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)</p>

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<p>1. NUMBER and OPERATIONS</p> <p>1.8 Properties of numbers</p>		<p>The student</p> <p>1.8.1 Applies properties of numbers and field properties to solve problems and to simplify computations involving whole numbers.</p> <ul style="list-style-type: none"> <li>• odd, even</li> <li>• commutative for addition (e.g. <math>6+4=4+6</math>)</li> <li>• associative for addition (e.g. <math>(2+7)+3=2+(7+3)</math>)</li> </ul> <p>M(N&amp;O)-2-8</p> <ul style="list-style-type: none"> <li>• multiplicative property of zero for single digit whole numbers (e.g. <math>6 \times 0 = 0</math>) (D)</li> <li>• identity for multiplication (e.g. <math>a \times 1 = a</math>) (D)</li> </ul>	<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"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <p><i>Everyday Mathematics Grade 2</i></p> <ul style="list-style-type: none"> <li>• <i>Units 2,6,10,11</i></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <i>McGraw-Hill Mathematics</i></li> <li>• <i>Teacher Created Materials</i></li> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach</i></li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• PRE AND POST EDM/GLE UNIT TESTS</li> </ul>

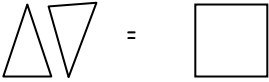
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		<ul style="list-style-type: none"> <li>commutative for multiplication for single digit whole numbers (e.g. <math>3 \times 4 = 4 \times 3</math>) (D) M(N&amp;O)-3-8</li> </ul> <p>1.8.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>1.8.3 <b>REQUIRED PROBLEMS</b></p>	<p>responses defending the student's mathematics</p> <ul style="list-style-type: none"> <li>facilitating problem solving approach to instruction</li> <li>integrating content with other core subjects</li> <li>using appropriate technology</li> <li>using frequent assessment to modify instruction</li> <li>modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>tiered assignments</li> <li>jigsawing</li> <li>pre/post assessments</li> <li>anchoring</li> <li>think/pair/share</li> <li>cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>K-W-L</li> <li>visualizing</li> <li>asking strategies</li> <li>inferring</li> <li>predicting</li> <li>making connections</li> <li>determining importance</li> <li>synthesizing</li> </ul>	<p><i>Math, K-6, Arthur Hyde</i></p> <ul style="list-style-type: none"> <li>Mathematics Books by Marilyn Burns</li> <li><i>Exemplars</i></li> <li><i>Problem Solvers</i></li> <li>Box It or Bag It Math</li> <li><i>Teaching Children Mathematics</i>, NCTM</li> <li><i>Comprehensive Math Assessment</i>, Options Pub., Inc.</li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>Calculators</li> <li>Computer lab</li> <li><a href="http://www.ridoe.net">www.ridoe.net</a></li> <li><a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>SCHOOL Resource Folder</li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>Unifix cubes</li> <li>Number lines/grids</li> <li>Multiplication charts</li> <li>EDM cards</li> <li>EDM games</li> <li>Geoboards</li> </ul> <p><b>School library resources</b></p> <ul style="list-style-type: none"> <li><i>Classroom Instruction That Works</i>, Marzano</li> </ul>	<p><b>SUGGESTED ASSESSMENTS</b></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>

# Mathematics Grade 2

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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>2. GEOMETRY AND MEASUREMENT</p> <p>2.1 Polygons</p>		<p>The student</p> <p>2.1.1 Uses</p> <ul style="list-style-type: none"> <li>• <b>properties</b> - characteristics that are true to a geometric shape</li> <li>• <b>attributes</b> - shape, size, color, and shading               <ul style="list-style-type: none"> <li>○ <b>measurable</b> - attributes that could be described by a measurement (e.g. weight, length, height)</li> <li>○ <b>non-measurable</b> - attributes that typically not described by a measurement (e.g. the texture of material, a type of material, or the shape of an object)</li> </ul> </li> <li>• <b>composition, or decomposition</b> -conceptual understanding of congruency as a result of composing or decomposing shapes to identify or create congruent figures by putting shapes together with no gaps or overlaps or by taking shapes apart</li> </ul> <div style="text-align: center;">  </div> <ul style="list-style-type: none"> <li>• <b>to sort or classify polygons</b> (triangles, squares, rectangles, rhombi, trapezoids, or hexagons) objects by a <u>combination of two</u> or more non-measurable or measurable attributes. M(G&amp;M)-2-1 (<b>state assessment</b>)</li> </ul> <p>2.1.2 Understands, uses, applies appropriate</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving approach to instruction</li> <li>• integrating content with other core subjects</li> <li>• using appropriate technology</li> <li>• using frequent assessment to modify instruction</li> <li>• modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>▪ tiered assignments</li> <li>▪ jigsawing</li> <li>▪ pre/post assessments</li> <li>▪ anchoring</li> <li>▪ think/pair/share</li> <li>▪ cubing, etc.</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematic Grade 2</i></p> <ul style="list-style-type: none"> <li>• Unit 5</li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• McGraw--Hill <i>Mathematics</i></li> <li>• <i>Teacher Created Materials</i></li> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>• <i>Mathematics Books</i> by Marilyn Burns</li> <li>• <i>Exemplars</i></li> <li>• <i>Problem Solvers</i></li> <li>• <i>Box It or Bag It Math</i></li> <li>• <i>Teaching Children Mathematics</i>, NCTM</li> <li>• <i>Comprehensive Math Assessment</i>, Options Pub., Inc.</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Computer lab</li> <li>• <a href="http://www.ridoe.net">www.ridoe.net</a></li> <li>• <a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>• <i>NECAP Release tasks</i></li> <li>• <a href="http://NECompact.org">NECompact.org</a></li> <li>• SCHOOL Resource Folder</li> </ul> <p><u>Materials</u></p> <ul style="list-style-type: none"> <li>• 3D-solids</li> <li>• Rulers</li> <li>• EDM cards</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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
		<p>technology to solve problems.</p> <p>2.1.3 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>Stick Math #16</li> <li>Joe's Fence #17</li> </ul>	<p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>K-W-L</li> <li>visualizing</li> <li>asking strategies</li> <li>inferring</li> <li>predicting</li> <li>making connections</li> <li>determining importance</li> <li>synthesizing</li> </ul>	<ul style="list-style-type: none"> <li>EDM games</li> <li>Geoboards</li> <li>Geometry template</li> <li>Graphing paper</li> <li>Dot paper</li> <li>Pattern blocks</li> <li>Attribute blocks</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li><i>Classroom Instruction That Works</i>, Marzano</li> <li><i>Knights of the Round Table Series</i></li> </ul>	
<p>2 <b>GEOMETRY AND MEASUREMENT</b></p> <p>2.2 Properties or attributes</p>		<p>The student</p> <p>2.2.1 <b>Begins to use properties or attributes</b> (shape of bases or number of lateral faces) to identify, compare, or describe three-dimensional shapes (rectangular prisms, triangular prisms, cylinders, or spheres). <b>(B) M(G&amp;M)-4-3</b></p> <p>2.2.2 <b>REQUIRED PROBLEMS</b></p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>using manipulatives</li> <li>facilitating cooperative group work</li> <li>discussing mathematics</li> <li>questioning and making conjectures</li> <li>justifying of thinking</li> <li>constructing written responses defending the student's mathematics</li> <li>facilitating problem solving approach to instruction</li> <li>integrating content with other core subjects</li> <li>using appropriate technology</li> <li>using frequent assessment to modify instruction</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li><i>Every Day Math Grade 2</i></li> <li><i>Units 5</i></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li><i>McGraw-Hill Mathematics</i></li> <li><i>Teacher Created Materials</i></li> <li><i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li><i>Mathematics Books</i> by Marilyn Burns</li> <li><i>Exemplars</i></li> <li><i>Problem Solvers</i></li> <li><i>Box It or Bag It Math</i></li> <li><i>Teaching Children Mathematics</i>, NCTM</li> <li><i>Comprehensive Math Assessment</i>, Options Pub., Inc.</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</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"> <li>models functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>tiered assignments</li> <li>jigsawing</li> <li>pre/post assessments</li> <li>anchoring</li> <li>think/pair/share</li> <li>cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>K-W-L</li> <li>visualizing</li> <li>asking strategies</li> <li>inferring</li> <li>predicting</li> <li>making connections</li> <li>determining importance</li> <li>synthesizing</li> </ul>	<p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Computer lab</li> <li><a href="http://www.glencoe.com">www.glencoe.com</a></li> <li><a href="http://www.ridoe.net">www.ridoe.net</a></li> <li><a href="http://www.ridoe.net/instruction/curriculum">www.ridoe.net/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>SCHOOL website (Share Point)</li> </ul> <p><u>Materials</u></p> <ul style="list-style-type: none"> <li>3D-solids</li> <li>Rulers (metric),</li> <li>EDM cards</li> <li>EDM games</li> <li>Geoboards</li> <li>Geometry template</li> <li>graphing paper</li> <li>dot paper</li> <li>Pattern blocks</li> <li>Attribute blocks</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li><i>Classroom Instruction That Works, Marzano</i></li> </ul>	<p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Performance-based Tasks</p> <p>Tests/ quizzes</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"> <li>composing and decomposing two-dimensional objects (and three-dimensional objects (D))</li> <li>using models or explanations (e.g., using triangular pattern blocks to construct a</li> </ul>	<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"> <li>using manipulatives</li> <li>facilitating cooperative group work</li> <li>discussing mathematics</li> <li>questioning and making</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <p><i>Everyday Mathematics Grade 2</i></p> <ul style="list-style-type: none"> <li>Units 5,7</li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li><i>McGraw--Hill Mathematics</i></li> <li><i>Teacher Created</i></li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>END-OF-YEAR ASSESSMENT (EDM and</li> </ul>

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		<p><u>figure congruent to the hexagonal pattern block)</u></p> <ul style="list-style-type: none"> <li>• <u>using line symmetry to demonstrate congruent parts within a shape.</u> M(G&amp;M)-2-4</li> <li>• <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> (D) M(G&amp;M)-3-4</li> </ul> <p>2.3.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>2.3.3 <b>REQUIRED PROBLEMS</b></p>	<p>conjectures</p> <ul style="list-style-type: none"> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving approach to instruction</li> <li>• integrating content with other core subjects</li> <li>• using appropriate technology</li> <li>• using frequent assessment to modify instruction</li> <li>• modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>▪ tiered assignments</li> <li>▪ jigsawing</li> <li>▪ pre/post assessments</li> <li>▪ anchoring</li> <li>▪ think/pair/share</li> <li>▪ cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> </ul>	<p><i>Materials</i></p> <ul style="list-style-type: none"> <li>• <i>Escher - Tessellations</i></li> <li>• <i>Quilting books</i></li> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6, Arthur Hyde</i></li> <li>• <i>Mathematics Books by Marilyn Burns</i></li> <li>• <i>Exemplars</i></li> <li>• <i>Problem Solvers</i></li> <li>• <i>Box It or Bag It Math</i></li> <li>• <i>Teaching Children Mathematics, NCTM</i></li> <li>• <i>Comprehensive Math Assessment, Options Pub., Inc.</i></li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Computer lab</a></li> <li>• <a href="http://www.ridoe.net">www.ridoe.net</a></li> <li>• <a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>• <a href="#">NECAP Release tasks</a></li> <li>• <a href="http://NECompact.org">NECompact.org</a></li> <li>• <a href="#">SCHOOL Resource Folder</a></li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>• 3D-solids</li> <li>• Rulers (metric),</li> <li>• EDM cards</li> <li>• EDM games</li> <li>• Geoboards</li> <li>• Geometry template</li> <li>• Tangrams</li> <li>• Graphing paper</li> <li>• Dot paper</li> <li>• Pattern blocks</li> </ul> <p><b>School library resources</b></p> <ul style="list-style-type: none"> <li>• <i>Classroom Instruction That Works, Marzano</i></li> </ul>	<p>Problem Solver)</p> <ul style="list-style-type: none"> <li>• <b>PRE AND POST EDM/GLE UNIT TESTS</b></li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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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			<ul style="list-style-type: none"> <li>synthesizing</li> </ul>		
<p>2 GEOMETRY AND MEASUREMENT</p> <p>2.4 Perimeter and Area</p>		<p>The student</p> <p>2.4.1 Demonstrates conceptual understanding of perimeter and area by</p> <ul style="list-style-type: none"> <li>using models or manipulatives to surround and cover polygons. M(G&amp;M)-2-6 (state assessment)</li> </ul> <p>2.4.2 Demonstrates conceptual understanding of perimeter of polygons, and the area of rectangles on grids using a variety of models or manipulatives. (D) M(G&amp;M)-3-6 (state assessment)</p> <p>2.4.3 Expresses all measures using appropriate units. (D) M(G&amp;M)-3-6 (state assessment)</p> <p>2.4.4 Understands, uses, applies appropriate technology to solve problems.</p> <p>2.4.5 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>Square Measurement #18</li> </ul>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>using manipulatives</li> <li>facilitating cooperative group work</li> <li>discussing mathematics</li> <li>questioning and making conjectures</li> <li>justifying of thinking</li> <li>constructing written responses defending the student's mathematics</li> <li>facilitating problem solving approach to instruction</li> <li>integrating content with other core subjects</li> <li>using appropriate technology</li> <li>using frequent assessment to modify instruction</li> <li>modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>tiered assignments</li> <li>jigsawing</li> <li>pre/post assessments</li> <li>anchoring</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <p><i>Everyday Mathematics Grade 2</i></p> <ul style="list-style-type: none"> <li>Units 9</li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li><i>McGraw--Hill Mathematics</i></li> <li><i>Teacher Created Materials</i></li> <li><i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li><i>Mathematics Books by Marilyn Burns</i></li> <li><i>Exemplars</i></li> <li><i>Problem Solvers</i></li> <li><i>Box It or Bag It Math</i></li> <li><i>Teaching Children Mathematics</i>, NCTM</li> <li><i>Comprehensive Math Assessment</i>, Options Pub., Inc.</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Calculators</li> <li>Overhead scientific calculator</li> <li>Computer lab</li> <li><a href="http://www.ride.net">www.ride.net</a></li> <li><a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>SCHOOL Resource</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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>

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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"> <li>▪ think/pair/share</li> <li>▪ cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> <li>• synthesizing</li> </ul>	<p>Folder</p> <p><u>Materials</u></p> <ul style="list-style-type: none"> <li>• 3D-solids</li> <li>• Rulers (metric),</li> <li>• EDM cards</li> <li>• EDM games</li> <li>• Geoboards</li> <li>• Geometry template</li> <li>• Tangrams</li> <li>• Graphing paper</li> <li>• Dot paper</li> <li>• Pattern blocks</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>• <i>Classroom Instruction That Works</i>, Marzano</li> </ul>	<p>Tests/ quizzes</p>
<p><b>2GEOMETRY AND MEASUREMENT</b></p> <p>2.5 Measurement and conversions</p>		<p>The student</p> <p>2.5.1 <b>Measures and uses units of measures appropriately and consistently, and makes conversions within systems when solving problems across the content strands. (state assessment)</b> M(G&amp;M)-2-7</p> <p><b>Length</b></p> <ul style="list-style-type: none"> <li>• <b>units (accuracy):</b> inch (to whole inch); Foot (to whole inch); centimeter (to whole centimeter); meter (to whole centimeter)</li> <li>• <b>equivalencies:</b> 12 inches in 1 foot; 100 centimeters in 1 meter, (3 feet in a yard (B) , 36 inches in a yard (B)</li> </ul> <p><b>Time</b></p> <ul style="list-style-type: none"> <li>• <b>units (accuracy):</b> hour (to 15 minute interval); day; year</li> </ul>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving approach to instruction</li> <li>• integrating content with other core subjects</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <p><i>Everyday Mathematics Grade 2</i></p> <ul style="list-style-type: none"> <li>• Units 8, 9</li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>• <i>Mathematics Books by Marilyn Burns</i></li> <li>• <i>Exemplars</i></li> <li>• <i>Problem Solvers</i></li> <li>• <i>Box It or Bag It Math</i></li> <li>• <i>Teaching Children Mathematics</i>, NCTM</li> <li>• <i>Comprehensive Math Assessment</i>, Options</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p>

# Mathematics Grade 2

Curriculum Writers: Adela Felag and Jessika Garcia

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"> <li><b>equivalencies:</b> 60 minutes in one hour, (24 hours in 1 day; 7 days in 1 week; 365 days in 1 year (D))</li> </ul> <p><b>Temperature</b></p> <ul style="list-style-type: none"> <li><b>unit (accuracy):</b> C° and F° (to 1 degree)</li> </ul> <p><b>Capacity</b></p> <ul style="list-style-type: none"> <li><b>unit (accuracy):</b> quart (to whole quart) (B)</li> </ul> <p><b>Mass</b></p> <ul style="list-style-type: none"> <li><b>unit (accuracy):</b> kilogram (to whole gram), gram (to whole gram) (B)</li> </ul> <p><b>Weight</b></p> <ul style="list-style-type: none"> <li><b>unit (accuracy):</b> pound (to whole pound) (B)</li> </ul> <p>2.5.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>2.5.3 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>The Counting Rope #19</li> <li>Dwarf Bunny #20</li> <li>Baseball Practice #21</li> <li>Frog Jumping #22</li> </ul>	<ul style="list-style-type: none"> <li>using appropriate technology</li> <li>using frequent assessment to modify instruction</li> <li>modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>tiered assignments</li> <li>jigsawing</li> <li>pre/post assessments</li> <li>anchoring</li> <li>think/pair/share</li> <li>cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>K-W-L</li> <li>visualizing</li> <li>asking strategies</li> <li>inferring</li> <li>predicting</li> <li>making connections</li> <li>determining importance</li> <li>synthesizing</li> </ul>	<p>Pub., Inc.</p> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>Calculator</li> <li>Computer lab</li> <li><a href="http://www.ridoe.net">www.ridoe.net</a></li> <li><a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>SCHOOL Resource Folder</li> <li>Geometers Sketch Pad</li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>Rulers (metric)</li> <li>tape measures</li> <li>yard/meter sticks</li> </ul> <p><b>School library resources</b></p> <ul style="list-style-type: none"> <li><i>Classroom Instruction That Works</i>, Marzano</li> </ul>	<p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p>
<p><b>2. GEOMETRY AND MEASUREMENT</b></p> <p>2.6 Spatial relationships</p>		<p>The student</p> <p>2.6.1 <b>Demonstrates understanding of spatial relationships using location and position by</b></p> <ul style="list-style-type: none"> <li>using positional language in <u>two- and three-dimensional situations to describe and</u></li> </ul>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>using manipulatives</li> <li>facilitating cooperative</li> </ul>	<p>Resources, also see pages 1-2</p> <p><b>Textbook</b></p> <p><i>Everyday Mathematics Grade 2</i></p> <ul style="list-style-type: none"> <li>Unit</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-YEAR ASSESSMENT</li> </ul>

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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><u>interpret relative positions (e.g., above the surface of the desk, below the triangle on the paper)</u></p> <ul style="list-style-type: none"> <li>• <u>creating and interpreting simple maps and naming locations on simple coordinate grids.</u> M(G&amp;M)-2-9</li> <li>• interpreting and giving directions from one location to another (e.g., classroom to the gym, from school to home) (D)</li> <li>• using positional words or compass directions. (D) M(G&amp;M)-3-9</li> </ul> <p>2.6.2 <b>Demonstrates conceptual understanding of spatial reasoning and visualization by</b></p> <ul style="list-style-type: none"> <li>• copying (D)</li> <li>• comparing (D)</li> <li>• drawing models of triangles, squares, rectangles, rhombi, trapezoids, hexagons, and circles, (octagons(B))</li> <li>• building models of rectangular prisms from (two-dimensional(B)) three-dimensional representations. M(G&amp;M)-3-10</li> </ul> <p>2.6.3 Understands, uses, applies appropriate technology to solve problems.</p> <p>2.6.4 <b>REQUIRED PROBLEMS</b></p>	<p>group work</p> <ul style="list-style-type: none"> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving approach to instruction</li> <li>• integrating content with other core subjects</li> <li>• using appropriate technology</li> <li>• using frequent assessment to modify instruction</li> <li>• modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>▪ tiered assignments</li> <li>▪ jigsawing</li> <li>▪ pre/post assessments</li> <li>▪ anchoring</li> <li>▪ think/pair/share</li> <li>▪ cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> </ul>	<p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>• <i>Mathematics Books by Marilyn Burns</i></li> <li>• <i>Exemplars</i></li> <li>• <i>Problem Solvers</i></li> <li>• <i>Box It or Bag It Math</i></li> <li>• <i>Teaching Children Mathematics</i>, NCTM</li> <li>• <i>Comprehensive Math Assessment</i>, Options Pub., Inc.</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Calculator</li> <li>• Computer lab</li> <li>• <a href="http://www.ridoe.net">www.ridoe.net</a></li> <li>• <a href="http://www.ridoe.net/instruction/curriculum">www.ridoe.net/instruction/curriculum</a></li> <li>• <b>NECAP Release tasks</b></li> <li>• <b>NECompact.org</b></li> <li>• <b>SCHOOL Resource Folder</b></li> <li>• <b>Geometers Sketch Pad</b></li> </ul> <p><u>Materials</u></p> <ul style="list-style-type: none"> <li>• Unifix cubes</li> <li>• 3D-solids</li> <li>• Rulers (metric),</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>• <i>Classroom Instruction That Works</i>, Marzano</li> </ul>	<p>(EDM and Problem Solver)</p> <ul style="list-style-type: none"> <li>• <b>END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</b></li> <li>• <b>PRE AND POST EDM/GLE UNIT TESTS</b></li> </ul> <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>

# Mathematics Grade 2

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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"> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> <li>• synthesizing</li> </ul>		
<p><b>3. FUNCTIONS AND ALGEBRA</b></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) represented in models, tables, or sequences by</p> <ul style="list-style-type: none"> <li>• extending the pattern to the next element</li> <li>• finding a missing element (e.g., 2, 4, 6, ____, 10). (state assessment) M(F&amp;A)-2-1</li> <li>• extending the pattern to the next one, <u>two</u>, or <u>three elements</u>, (D) M(F&amp;A)-3-1</li> </ul> <p>3.1.2 Writes rule in words or<sup>sc</sup> symbols to find the next case. (B) M(F&amp;A)-4-1</p> <ul style="list-style-type: none"> <li>• day *2= # of seeds</li> <li>• 2D=S (symbols)</li> </ul> <p>3.1.3 Understands, uses, applies appropriate technology to solve problems.</p> <p>3.1.4 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• Circle Patterns #23</li> <li>• Benny's Blocks #24</li> <li>• Number Patterns #25</li> </ul>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving approach to instruction</li> <li>• integrating content with other core subjects</li> <li>• using appropriate technology</li> <li>• using frequent assessment to modify instruction</li> <li>• modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>▪ tiered assignments</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 2</i> Not available</p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> <li>• Hands-on Algebra</li> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>• Mathematics Books by Marilyn Burns</li> <li>• <i>Exemplars</i></li> <li>• <i>Problem Solvers</i></li> <li>• Box It or Bag It Math</li> <li>• <i>Teaching Children Mathematics</i>, NCTM</li> <li>• <i>Comprehensive Math Assessment</i>, Options Pub., Inc.</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Calculator</li> <li>• Computer lab</li> <li>• <a href="http://www.ridoe.net">www.ridoe.net</a></li> <li>• <a href="http://www.ridoe.net/instruction/curriculum">www.ridoe.net/instruction/curriculum</a></li> <li>• NECAP Release tasks</li> <li>• <a href="http://NECompact.org">NECompact.org</a></li> <li>• SCHOOL Resource</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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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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"> <li>▪ jigsawing</li> <li>▪ pre/post assessments</li> <li>▪ anchoring</li> <li>▪ think/pair/share</li> <li>▪ cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> <li>• synthesizing</li> </ul>	<p>Folder</p> <p><u>Materials</u></p> <ul style="list-style-type: none"> <li>• Unifix cubes</li> <li>• Rulers (metric)</li> <li>• Pan balances</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>• <i>Classroom Instruction That Works</i>, Marzano</li> </ul>	<p>Tests/ quizzes</p>
<p>3. FUNCTIONS AND ALGEBRA</p> <p>3.2 Algebraic expressions</p>		<p>The student</p> <p>3.2.1 Demonstrates conceptual understanding of algebraic expressions by</p> <ul style="list-style-type: none"> <li>• using letters or symbols to represent unknown quantities to write simple linear algebraic expressions involving any one of the four operations. (B)M(F&amp;A)-4-3</li> <li>• evaluating simple linear algebraic expressions using whole numbers. (B)M(F&amp;A)-4-3 (e.g. determine the value of <math>y</math> when given <math>6 = y + 2</math>)</li> </ul> <p>3.2.2 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"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving approach to instruction</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 2</i> Units 2,4,6</p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>• Mathematics Books by Marilyn Burns</li> <li>• Exemplars</li> <li>• Problem Solvers</li> <li>• Box It or Bag It Math</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b> Anecdotal record (e.g. defends student generated conjectures)</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
		<p>3.2.3 REQUIRED PROBLEMS</p>	<ul style="list-style-type: none"> <li>integrating content with other core subjects</li> <li>using appropriate technology</li> <li>using frequent assessment to modify instruction</li> <li>modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>tiered assignments</li> <li>jigsawing</li> <li>pre/post assessments</li> <li>anchoring</li> <li>think/pair/share</li> <li>cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>K-W-L</li> <li>visualizing</li> <li>asking strategies</li> <li>inferring</li> <li>predicting</li> <li>making connections</li> <li>determining importance</li> <li>synthesizing</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Teaching Children Mathematics</a>, NCTM</li> <li><a href="#">Comprehensive Math Assessment</a>, Options Pub., Inc</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Calculator</li> <li>Computer lab</li> <li><a href="http://www.ridoe.net">www.ridoe.net</a></li> <li><a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>SCHOOL Resource Folder</li> </ul> <p><u>Materials</u></p> <ul style="list-style-type: none"> <li>Pattern tiles</li> <li>Unifix cubes</li> <li>Rulers (metric)</li> <li>Pan balances</li> <li>Graphing paper</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li><a href="#">Classroom Instruction That Works</a>, Marzano</li> </ul>	<p>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>3. FUNCTIONS AND ALGEBRA</p>		<p>The student</p> <p>3.3.1 Demonstrates conceptual understanding of equality by</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <a href="#">Everyday Mathematics</a></p>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL</b></p>

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Curriculum Writers: Adela Felag and Jessika Garcia

STANDARDS GLEs	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT/ EVIDENCE
3.3 Equality		<ul style="list-style-type: none"> <li>finding the value that will make an open sentence true (e.g., <math>2+w=7</math>). (limited to one operation and limited to use addition or subtraction or <b>multiplication (D)</b>) M(F&amp;A)-2-4 (<b>state assessment</b>)</li> <li>showing equivalence between two expressions using models or different representations of the expressions <b>(D)</b> M(F&amp;A)-3-4</li> <li>simplifying numerical expressions where left to right computations may be modified only by the use of parentheses [e.g., <math>14 - (2 \times 5)</math>]</li> </ul> <p>3.3.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>3.3.3 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li><b>Missing Number #26</b></li> </ul>	<ul style="list-style-type: none"> <li>using manipulatives</li> <li>facilitating cooperative group work</li> <li>discussing mathematics</li> <li>questioning and making conjectures</li> <li>justifying of thinking</li> <li>constructing written responses defending the student's mathematics</li> <li>facilitating problem solving approach to instruction</li> <li>integrating content with other core subjects</li> <li>using appropriate technology</li> <li>using frequent assessment to modify instruction</li> <li>modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>tiered assignments</li> <li>jigsawing</li> <li>pre/post assessments</li> <li>anchoring</li> <li>think/pair/share</li> <li>cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>K-W-L</li> <li>visualizing</li> </ul>	<p><i>Grade 2 Unit 10</i></p> <p><b>Supplementary books/materials</b></p> <ul style="list-style-type: none"> <li><i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>Mathematics Books by Marilyn Burns</li> <li><i>Exemplars</i></li> <li><i>Problem Solvers</i></li> <li>Box It or Bag It Math</li> <li><i>Teaching Children Mathematics</i>, NCTM</li> <li><i>Comprehensive Math Assessment</i>, Options Pub., Inc</li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>Calculator</li> <li>Computer lab</li> <li><a href="http://www.ridoe.net">www.ridoe.net</a></li> <li><a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>SCHOOL Resource Folder</li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>Pattern tiles</li> <li>Unifix cubes</li> <li>Rulers (metric)</li> <li>Pan balances</li> <li>Graphing paper</li> </ul> <p><b>School library resources</b></p> <ul style="list-style-type: none"> <li><i>Classroom Instruction That Works</i>, Marzano</li> </ul>	<p><b>ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li><b>MID-YEAR ASSESSMENT (EDM and Problem Solver)</b></li> <li><b>END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</b></li> <li><b>PRE AND POST EDM/GLE UNIT TESTS</b></li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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 2

Curriculum Writers: Adela Felag and Jessika Garcia

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"> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> <li>• synthesizing</li> </ul>		
<p><b>4. DATA, STATISTICS, AND PROBABILITY</b></p> <p>4.1 Given representation</p>		<p><b>The student</b></p> <p>4.1.1 <b>Interprets a given representation</b> (pictographs with one-to-one correspondence, line plots, tally charts, or tables)</p> <ul style="list-style-type: none"> <li>• answer questions related to the data</li> <li>• analyze the data to formulate conclusions.</li> <li>• <b>(state assessment)</b> M(DSP)-2-1</li> <li>• <b>make predictions. (D)</b> M(DSP)-3-1 <b>(state assessment)</b></li> <li>• <b>justify conclusions and solve problems (B)</b> M (DESP)-4-1</li> </ul> <p>(IMPORTANT: Analyzes data consistent with concepts and skills in M(DSP)-2-2.)</p> <p>4.1.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>4.1.3 <b>REQUIRED PROBLEMS</b></p>	<p><b>Teacher may model and/or facilitate the following: (also see pages 1-2)</b></p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving approach to instruction</li> <li>• integrating content with other core subjects</li> <li>• using appropriate technology</li> <li>• using frequent assessment to modify instruction</li> <li>• modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and</p>	<p><b>Resources, also see pages 1-2</b></p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 2 Unit 6</i></p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>• <i>Mathematics Books</i> by Marilyn Burns</li> <li>• <i>Exemplars</i></li> <li>• <i>Problem Solvers</i></li> <li>• <i>Box It or Bag It Math</i></li> <li>• <i>Teaching Children Mathematics</i>, NCTM</li> <li>• <i>Comprehensive Math Assessment</i>, Options Pub., Inc</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Calculator</li> <li>• Computer lab</li> <li>• <a href="http://www.ridoe.net">www.ridoe.net</a></li> <li>• <a href="http://www.ridoe.net/instruction/curriculum">www.ridoe.net/instruction/curriculum</a></li> <li>• <b>NECAP Release tasks</b></li> </ul>	<p><b>Assessments/evidence, also see pages 1-2</b></p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• <b>MID-YEAR ASSESSMENT (EDM and Problem Solver)</b></li> <li>• <b>END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</b></li> <li>• <b>PRE AND POST EDM/GLE UNIT TESTS</b></li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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
			<p>product and implementing</p> <ul style="list-style-type: none"> <li>▪ tiered assignments</li> <li>▪ jigsawing</li> <li>▪ pre/post assessments</li> <li>▪ anchoring</li> <li>▪ think/pair/share</li> <li>▪ cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> <li>• synthesizing</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="http://NECompact.org">NECompact.org</a></li> <li>• <a href="#">SCHOOL Resource Folder</a></li> </ul> <p><u>Materials</u></p> <ul style="list-style-type: none"> <li>• Dice</li> <li>• Spinners</li> <li>• Two-colored chips</li> <li>• Graphing paper</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>• <a href="#">Classroom Instruction That Works, Marzano</a></li> </ul>	<p>Rubrics</p> <p>Tests/ quizzes</p>
<p>4. DATA, STATISTICS, AND PROBABILITY</p> <p>4.2 Patterns, trends, distributions</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"> <li>• more</li> <li>• less</li> <li>• equal (state assessment) M(DSP)-2-2</li> <li>• median (B)</li> <li>• mode (B)</li> <li>• range. (B) M(DSP)-4-2</li> </ul> <p>4.2.2 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"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <p><a href="#">Everyday Mathematics Grade 2 Unit 7</a></p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> <li>• <a href="#">Comprehending Math: Adapting Reading Strategies to Teach Math, K-6, Arthur Hyde</a></li> <li>• <a href="#">Mathematics Books by Marilyn Burns Exemplars</a></li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></p>

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		<p>4.2.3 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• Apples #27</li> <li>• Counting Geese #28</li> </ul>	<ul style="list-style-type: none"> <li>• facilitating problem solving approach to instruction</li> <li>• integrating content with other core subjects</li> <li>• using appropriate technology</li> <li>• using frequent assessment to modify instruction</li> <li>• modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>▪ tiered assignments</li> <li>▪ jigsawing</li> <li>▪ pre/post assessments</li> <li>▪ anchoring</li> <li>▪ think/pair/share</li> <li>▪ cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> <li>• synthesizing</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Problem Solvers</i></li> <li>• <i>Box It or Bag It Math</i></li> <li>• <i>Teaching Children Mathematics</i>, NCTM</li> <li>• <i>Comprehensive Math Assessment</i>, Options Pub., Inc</li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>• Calculator</li> <li>• Computer lab</li> <li>• <a href="http://www.ridoe.net">www.ridoe.net</a></li> <li>• <a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>• <b>NECAP Release tasks</b></li> <li>• <b>NECompact.org</b></li> <li>• <b>SCHOOL Resource Folder</b></li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>• Dice</li> <li>• Spinners</li> <li>• Two-colored Chips</li> <li>• Graphing paper</li> </ul> <p><b>School library resources</b></p> <ul style="list-style-type: none"> <li>• <i>Classroom Instruction That Works</i>, Marzano</li> </ul>	<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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<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 (D) line plots, pictographs (B) to</p> <ul style="list-style-type: none"> <li>• answer questions related to the data</li> <li>• analyze the data to               <ul style="list-style-type: none"> <li>○ formulate (D) (or justify (B) conclusions</li> <li>○ make predictions</li> <li>○ solve problems (D) M(DSP)-3-3</li> </ul> </li> </ul> <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 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• Musical Combinations #29</li> <li>• Clowning Around #30</li> <li>• Main Street #31</li> </ul>	<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"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving approach to instruction</li> <li>• integrating content with other core subjects</li> <li>• using appropriate technology</li> <li>• using frequent assessment to modify instruction</li> <li>• modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>▪ tiered assignments</li> <li>▪ jigsawing</li> <li>▪ pre/post assessments</li> <li>▪ anchoring</li> <li>▪ think/pair/share</li> <li>▪ cubing, etc.</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 2</i> Unit 6</p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>• Mathematics Books by Marilyn Burns</li> <li>• <i>Exemplars</i></li> <li>• <i>Problem Solvers</i></li> <li>• Box It or Bag It Math</li> <li>• <i>Teaching Children Mathematics</i>, NCTM</li> <li>• <i>Comprehensive Math Assessment</i>, Options Pub., Inc</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Calculator</li> <li>• Computer lab</li> <li>• <a href="http://www.rido.net">www.rido.net</a></li> <li>• <a href="http://www.rido.net/instruction/curriculum">www.rido.net/instruction/curriculum</a></li> <li>• <a href="#">NECAP Release tasks</a></li> <li>• <a href="http://NECompact.org">NECompact.org</a></li> <li>• <a href="#">SCHOOL Resource Folder</a></li> </ul> <p><u>Materials</u></p> <ul style="list-style-type: none"> <li>• Dice</li> <li>• Spinners</li> <li>• Two-colored Chips</li> <li>• Graphing paper</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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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			Reading strategies to teach mathematics (Hyde) <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> <li>• synthesizing</li> </ul>	<u>School library resources</u> <ul style="list-style-type: none"> <li>• <i>Classroom Instruction That Works</i>, Marzano</li> </ul>	
<b>4. DATA, STATISTICS, AND PROBABILITY</b>  4.4. Representations or elements		<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 (D)</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 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• Books in Book Packs #32</li> </ul>	<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"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving approach to instruction</li> <li>• integrating content with other core subjects</li> <li>• using appropriate technology</li> <li>• using frequent assessment to modify instruction</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u>  <i>Everyday Mathematics Grade 2 Unit 12</i></p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>• Mathematics Books by Marilyn Burns</li> <li>• Exemplars</li> <li>• Problem Solvers</li> <li>• Box It or Bag It Math</li> <li>• <i>Teaching Children Mathematics</i>, NCTM</li> <li>• <i>Comprehensive Math Assessment</i>, Options Pub., Inc</li> </ul> <p><u>Technology</u></p>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p>

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			<ul style="list-style-type: none"> <li>modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>tiered assignments</li> <li>jigsawing</li> <li>pre/post assessments</li> <li>anchoring</li> <li>think/pair/share</li> <li>cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>K-W-L</li> <li>visualizing</li> <li>asking strategies</li> <li>inferring</li> <li>predicting</li> <li>making connections</li> <li>determining importance</li> <li>synthesizing</li> </ul>	<ul style="list-style-type: none"> <li>Calculator</li> <li>Computer lab</li> <li><a href="http://www.glencoe.com">www.glencoe.com</a></li> <li><a href="http://www.rido.net">www.rido.net</a></li> <li><a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>SCHOOL Resource Folder</li> </ul> <p><u>Materials</u></p> <ul style="list-style-type: none"> <li>Dice</li> <li>Spinners</li> <li>Two-colored chips</li> <li>Graphing paper</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li><i>Classroom Instruction That Works</i>, Marzano</li> </ul>	<p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p>
<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 (simple permutations e.g., given 3 digits (4,7,9) what are all the possible combinations that can be made, 479, 497, 749...(D) using a variety of strategies e.g.,</p> <ul style="list-style-type: none"> <li>student diagrams</li> <li>organized lists</li> <li>tables</li> </ul>	<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"> <li>using manipulatives</li> <li>facilitating cooperative group work</li> <li>discussing mathematics</li> <li>questioning and making</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 2</i> Unit 12</p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> <li><i>Comprehending Math: Adapting Reading</i></li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>END-OF-YEAR ASSESSMENT (EDM and</li> </ul>

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Curriculum Writers: Adela Felag and Jessika Garcia

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"> <li>• tree diagrams</li> <li>• or<sup>sc</sup> others M(DSP)-2-4 (state assessment)</li> </ul> <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"> <li>• conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving approach to instruction</li> <li>• integrating content with other core subjects</li> <li>• using appropriate technology</li> <li>• using frequent assessment to modify instruction</li> <li>• modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>▪ tiered assignments</li> <li>▪ jigsawing</li> <li>▪ pre/post assessments</li> <li>▪ anchoring</li> <li>▪ think/pair/share</li> <li>▪ cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> </ul>	<p><i>Strategies to Teach Math, K-6, Arthur Hyde</i></p> <ul style="list-style-type: none"> <li>• Mathematics Books by Marilyn Burns</li> <li>• Exemplars</li> <li>• Problem Solvers</li> <li>• Box It or Bag It Math</li> <li>• Teaching Children Mathematics, NCTM</li> <li>• Comprehensive Math Assessment, Options Pub., Inc</li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>• Calculator</li> <li>• Computer lab</li> <li>• <a href="http://www.ridoe.net">www.ridoe.net</a></li> <li>• <a href="http://www.ridoe.net/instruction/curriculum">www.ridoe.net/instruction/curriculum</a></li> <li>• NECAP Release tasks</li> <li>• NECompact.org</li> <li>• SCHOOL Resource Folder</li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>• Dice</li> <li>• Spinners</li> <li>• Two-colored Chips</li> <li>• Graphing paper</li> </ul> <p><b>School library resources</b></p> <ul style="list-style-type: none"> <li>• <i>Classroom Instruction That Works, Marzano</i></li> </ul>	<p>Problem Solver)</p> <ul style="list-style-type: none"> <li>• PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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>

# Mathematics Grade 2

Curriculum Writers: Adela Felag and Jessika Garcia

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"> <li>synthesizing</li> </ul>		
<p>4. DATA, STATISTICS, AND PROBABILITY</p> <p>4.6 Probability event</p>		<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"> <li>uses experiments to describe the likelihood or chance of an event using               <ul style="list-style-type: none"> <li>"more likely"</li> <li>"less likely"</li> <li>"equally likely" certain or impossible. M(DSP)-2-5</li> </ul> </li> <li>predicts the likelihood of an event               <ul style="list-style-type: none"> <li>using "more likely," "less likely," "equally likely," certain, or impossible and tests the prediction through experiments (D)</li> <li>determines if a game is fair. (D) M(DSP)-3-5</li> </ul> </li> </ul> <p>4.6.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>4.6.3 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>Cards #33</li> </ul>	<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"> <li>using manipulatives</li> <li>facilitating cooperative group work</li> <li>discussing mathematics</li> <li>questioning and making conjectures</li> <li>justifying of thinking</li> <li>constructing written responses defending the student's mathematics</li> <li>facilitating problem solving approach to instruction</li> <li>integrating content with other core subjects</li> <li>using appropriate technology</li> <li>using frequent assessment to modify instruction</li> <li>modeling functions of a calculator</li> </ul> <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 2</i> Not available</p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> <li><i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>Mathematics Books by Marilyn Burns</li> <li><i>Exemplars</i></li> <li><i>Problem Solvers</i></li> <li>Box It or Bag It Math</li> <li><i>Teaching Children Mathematics</i>, NCTM</li> <li><i>Comprehensive Math Assessment</i>, Options Pub., Inc</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Calculator</li> <li>Computer lab</li> <li><a href="http://www.ridoe.net">www.ridoe.net</a></li> <li><a href="http://www.ridoe.net/instruction/curriculum">www.ridoe.net/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>SCHOOL Resource</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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"> <li>▪ tiered assignments</li> <li>▪ jigsawing</li> <li>▪ pre/post assessments</li> <li>▪ anchoring</li> <li>▪ think/pair/share</li> <li>▪ cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> <li>• synthesizing</li> </ul>	<p>Folder</p> <p><u>Materials</u></p> <ul style="list-style-type: none"> <li>• Dice</li> <li>• Spinners</li> <li>• Two-colored Chips</li> <li>• Graphing paper</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>• <i>Classroom Instruction That Works</i>, Marzano</li> </ul>	<p>Tests/ quizzes</p>
<p>4. DATA, STATISTICS, AND PROBABILITY</p> <p>4.7 Experimental or theoretical probability</p>		<p>The student</p> <p>4.7.1 <u>In response to a teacher or student generated question or hypothesis, groups</u></p> <ul style="list-style-type: none"> <li>• <u>decide the most effective method (e.g., survey, observation, experimentation) to collect the data (numerical or categorical) necessary to answer the question</u></li> <li>• <u>collect, organize, and appropriately display the data</u></li> <li>• <u>analyze the data to draw conclusions about the question or hypothesis being tested</u></li> <li>• <u>when appropriate make predictions.</u></li> </ul> <p>M(DSP)-2-6</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"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u> <i>Everyday Mathematics Grade 2</i> Not available</p> <p><u>Supplementary books/materials</u></p> <ul style="list-style-type: none"> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>• Mathematics Books by Marilyn Burns</li> <li>• Exemplars</li> <li>• Problem Solvers</li> <li>• Box It or Bag It</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b> Anecdotal record (e.g. defends</p>

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		<p>IMPORTANT: <i>Analyzes data consistent with concepts and skills in M(DSP)-2-2.)</i></p> <p>4.7.2 Understands, uses, applies appropriate technology to solve problems.</p> <p>4.7.3 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• Popcorn Party #34</li> </ul>	<p>approach to instruction</p> <ul style="list-style-type: none"> <li>• integrating content with other core subjects</li> <li>• using appropriate technology</li> <li>• using frequent assessment to modify instruction</li> <li>• modeling functions of a calculator</li> </ul> <p>Differentiated instruction by varying the content, process, and product and implementing</p> <ul style="list-style-type: none"> <li>▪ tiered assignments</li> <li>▪ jigsawing</li> <li>▪ pre/post assessments</li> <li>▪ anchoring</li> <li>▪ think/pair/share</li> <li>▪ cubing, etc.</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> <li>• synthesizing</li> </ul>	<p><u>Math</u></p> <ul style="list-style-type: none"> <li>• <i>Teaching Children Mathematics</i>, NCTM</li> <li>• <i>Comprehensive Math Assessment</i>, Options Pub., Inc</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Calculator</li> <li>• Computer lab</li> <li>• <a href="http://www.rido.net">www.rido.net</a></li> <li>• <a href="http://www.rido.net/education/curriculum">www.rido.net/education/curriculum</a></li> <li>• <i>NECAP Release tasks</i></li> <li>• <a href="http://NECompact.org">NECompact.org</a></li> <li>• SCHOOL Resource Folder</li> </ul> <p><u>Materials</u></p> <ul style="list-style-type: none"> <li>• Dice</li> <li>• Spinners</li> <li>• Two-colored Chips</li> <li>• Graphing paper</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>• <i>Classroom Instruction That Works</i>, Marzano</li> </ul>	<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>

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<p>5. PROBLEM SOLVING, REASONING, AND PROOF</p> <p>5.1 Problem Solving strategies</p>		<p>Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content and be able to:</p> <p>5.1.1 Formulate and solve multi-step problems from everyday and mathematical situations.</p> <p>5.1.2 Solve problems using a variety of strategies (e.g., working backwards, looking for patterns and relationships; guess and check; making tables, charts, or organized lists; solving a simpler version of a problem, drawing a diagram; or creating a model)</p> <p>5.1.3 Verify and interpret results with respect to the original problem.</p> <p>5.1.4 Determine if the solution of a problem is reasonable.</p> <p>5.1.5 Solve problems using manipulatives, graphs, charts, diagrams, and calculators.</p> <p>5.1.6 Demonstrate that a problem may be solved in more than one way.</p> <p>5.1.7 Exhibit confidence in their ability to solve problems independently and in groups.</p> <p>5.1.8 Display increasing perseverance, and persistence in problem solving. M(PRP)-2-1</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving approach to instruction</li> <li>• integrating content with other core subjects</li> <li>• using appropriate technology</li> <li>• using frequent assessment to modify instruction</li> <li>• modeling functions a calculator</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li>• <i>Everyday Mathematics Grade 2</i></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>• <i>Mathematics Books</i> by Marilyn Burns</li> <li>• <i>Exemplars</i></li> <li>• <i>Problem Solvers</i></li> <li>• <i>Box It or Bag It Math</i></li> <li>• <i>Teaching Children Mathematics</i>, NCTM</li> <li>• <i>Comprehensive Math Assessment</i>, Options Pub., Inc</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Calculator</li> <li>• Computer lab</li> <li>• <a href="http://www.ridoe.net">www.ridoe.net</a></li> <li>• <a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>• <i>NECAP Release tasks</i></li> <li>• <i>NECompact.org</i></li> <li>• <i>SCHOOL Resource Folder</i></li> </ul> <p><u>Materials</u></p> <ul style="list-style-type: none"> <li>• Unifix cubes</li> <li>• 3D-solids</li> <li>• Rulers (metric),</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>• <i>Classroom Instruction That Works</i>, Marzano</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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"> <li>synthesizing</li> </ul>		
<p><b>5. PROBLEM SOLVING, REASONING, AND PROOF</b></p> <p>5.2 Mathematical reasoning and proof</p>		<p>The student will use mathematical reasoning and proof and be able to:</p> <p>5.2.1 Use models, known facts, properties, and relationships to explain their thinking.</p> <p>5.2.2 Justify solution processes and answers (e.g., "I chose this method to solve the problem because...").</p> <p>5.2.3 Draw conclusions using inductive reasoning.</p> <p>5.2.4 Identify the missing information needed to find a solution to a given story problem.</p> <p>5.2.5 Use patterns and relationships to analyze Mathematical situations (e.g., count by fives). M(PRP)-2-2</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>using manipulatives</li> <li>facilitating cooperative group work</li> <li>discussing mathematics</li> <li>questioning and making conjectures</li> <li>justifying of thinking</li> <li>constructing written responses defending the student's mathematics</li> <li>facilitating problem solving approach to instruction</li> <li>integrating content with other core subjects</li> <li>using appropriate technology</li> <li>using frequent assessment to modify instruction</li> <li>modeling functions a calculator</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>K-W-L</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li><i>Everyday Mathematics Grade 2</i> Not available</li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li><i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>Mathematics Books by Marilyn Burns</li> <li><i>Exemplars</i></li> <li><i>Problem Solvers</i></li> <li>Box It or Bag It Math</li> <li><i>Teaching Children Mathematics</i>, NCTM</li> <li><i>Comprehensive Math Assessment</i>, Options Pub., Inc</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Calculator</li> <li>Computer lab</li> <li><a href="http://www.ridoe.net">www.ridoe.net</a></li> <li><a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>SCHOOL Resource Folder</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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"> <li>visualizing</li> <li>asking strategies</li> <li>inferring</li> <li>predicting</li> <li>making connections</li> <li>determining importance</li> <li>synthesizing</li> </ul>	<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>Unifix cubes</li> <li>3D-solids</li> <li>Rulers (metric),</li> </ul> <p><b>School library resources</b></p> <ul style="list-style-type: none"> <li><i>Classroom Instruction That Works</i>, Marzano</li> </ul>	Tests/ quizzes
<p><b>COMMUNICATION, CONNECTIONS, AND REPRESENTATION</b></p> <p>6.1 Communicate understanding</p>		<p>Students will communicate their understanding of mathematics and be able to:</p> <p>6.1.1 Demonstrate mathematical communication through discussion, reading, writing, listening, and responding, individually and in groups.</p> <p>6.1.2 Discuss relationships between everyday language and mathematical language and symbols (e.g., words that mean something different in mathematics and in everyday life).</p> <p>6.1.3 Explain conclusions, thought processes, and strategies in problem-solving situations.</p> <p>6.1.4 Discuss, illustrate, and write about mathematical concepts and relationships.</p> <p>6.1.5 Draw pictures and use objects to illustrate mathematical concepts. M(CCR)-2-1</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>using manipulatives</li> <li>facilitating cooperative group work</li> <li>discussing mathematics</li> <li>questioning and making conjectures</li> <li>justifying of thinking</li> <li>constructing written responses defending the student's mathematics</li> <li>facilitating problem solving approach to instruction</li> <li>integrating content with other core subjects</li> <li>using appropriate technology</li> <li>using frequent assessment to modify instruction</li> <li>modeling functions a calculator</li> </ul> <p>Reading strategies to teach</p>	<p>Resources, also see pages 1-2</p> <p><b>Textbook</b></p> <ul style="list-style-type: none"> <li><i>Everyday Mathematics Grade 2</i></li> </ul> <p><b>Supplementary books</b></p> <ul style="list-style-type: none"> <li><i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>Mathematics Books by Marilyn Burns</li> <li><i>Exemplars</i></li> <li><i>Problem Solvers</i></li> <li>Box It or Bag It Math</li> <li><i>Teaching Children Mathematics</i>, NCTM</li> <li><i>Comprehensive Math Assessment</i>, Options Pub., Inc</li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>Calculator</li> <li>Computer lab</li> <li><a href="http://www.ridee.net">www.ridee.net</a></li> <li><a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>SCHOOL Resource</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></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)</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
			mathematics (Hyde) <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> <li>• synthesizing</li> </ul>	Folder  <u>Materials</u> <ul style="list-style-type: none"> <li>• Unifix cubes</li> <li>• 3D-solids</li> <li>• Rulers (metric),</li> </ul> <u>School library resources</u> <ul style="list-style-type: none"> <li>• <i>Classroom Instruction That Works</i>, Marzano</li> </ul>	and products)  Rubrics  Tests/ quizzes
<b>6. COMMUNICATION, CONNECTIONS, AND REPRESENTATION</b>  6.2 Representations		<p>Students will create and use representations to communicate mathematical ideas and to solve problems and be able to:</p> <p>6.2.1 Create and use age level appropriate representations to organize, record, and communicate mathematical ideas (e.g., students should recognize the relationship among seven counters, seven tally marks, and the symbol 7).</p> <p>6.2.2 Select, apply, and translate among mathematical representations to solve problems (e.g., representing fractions with circles, with geoboards, and with pattern blocks).</p> <p>6.2.3 Link different representations.</p> <p>6.2.4 Use representations to model and interpret physical, social, and mathematical phenomena.</p> <p>6.2.5 Use conventional and self-generated (invented) representations and connect them.</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving approach to instruction</li> <li>• integrating content with other core subjects</li> <li>• using appropriate technology</li> <li>• using frequent assessment to modify instruction</li> <li>• modeling functions a calculator</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li>• <i>Everyday Mathematics Grade 2</i></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>• <i>Mathematics Books by Marilyn Burns</i></li> <li>• <i>Exemplars</i></li> <li>• <i>Problem Solvers</i></li> <li>• <i>Box It or Bag It Math</i></li> <li>• <i>Teaching Children Mathematics</i>, NCTM</li> <li>• <i>Comprehensive Math Assessment</i>, Options Pub., Inc</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Calculator</li> <li>• Computer lab</li> <li>• <a href="http://www.ridoe.net">www.ridoe.net</a></li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p>

# Mathematics Grade 2

Curriculum Writers: Adela Felag and Jessika Garcia

STANDARDS GLEs	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT/ EVIDENCE
		6.2.6 Realize that any representation is subject to multiple interpretations (e.g., drawings and graphs can be read in a different way). M(CCR)-2-2	Reading strategies to teach mathematics (Hyde) <ul style="list-style-type: none"> <li>• K-W-L</li> <li>• visualizing</li> <li>• asking strategies</li> <li>• inferring</li> <li>• predicting</li> <li>• making connections</li> <li>• determining importance</li> <li>• synthesizing</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>• <a href="#">NECAP Release tasks</a></li> <li>• <a href="http://NECompact.org">NECompact.org</a></li> <li>• <a href="#">SCHOOL Resource Folder</a></li> </ul> <p><u>Materials</u></p> <ul style="list-style-type: none"> <li>• Unifix cubes</li> <li>• 3D-solids</li> <li>• Rulers (metric),</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>• <i>Classroom Instruction That Works</i>, Marzano</li> </ul>	Portfolio (samples of process and products)  Rubrics  Tests/ quizzes
<b>6. COMMUNICATION, CONNECTIONS, AND REPRESENTATION</b>  6.3 Mathematical Connections		<p>Students will recognize, explore, and develop mathematical connections and be able to:</p> <p>6.3.1 Link conceptual and procedural knowledge (e.g., they will know that when they "regroup," they are simply changing the representation of the minuend, but not its value).</p> <p>6.3.2 Recognize and use mathematics in other curriculum areas (e.g., science, social studies).</p> <p>6.3.3 Recognize and use mathematics in their daily lives (e.g., graphs, tables, or maps).</p> <p>6.3.4 Identify mathematical situations occurring in literature for children.</p> <p>6.3.5 Identify examples of geometry in nature, art, and architecture. M(CCR)-2-3</p>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>• using manipulatives</li> <li>• facilitating cooperative group work</li> <li>• discussing mathematics</li> <li>• questioning and making conjectures</li> <li>• justifying of thinking</li> <li>• constructing written responses defending the student's mathematics</li> <li>• facilitating problem solving approach to instruction</li> <li>• integrating content with other core subjects</li> <li>• using appropriate technology</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li>• <i>Everyday Mathematics Grade 2</i></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>• <i>Mathematics Books by Marilyn Burns</i></li> <li>• <i>Exemplars</i></li> <li>• <i>Problem Solvers</i></li> <li>• <i>Box It or Bag It Math</i></li> <li>• <i>Teaching Children Mathematics</i>, NCTM</li> <li>• <i>Comprehensive Math Assessment</i>, Options Pub., Inc</li> </ul> <p><u>Technology</u></p>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>• PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</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"> <li>using frequent assessment to modify instruction</li> <li>modeling functions of a calculator</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>K-W-L</li> <li>visualizing</li> <li>asking strategies</li> <li>inferring</li> <li>predicting</li> <li>making connections</li> <li>determining importance</li> <li>synthesizing</li> </ul>	<ul style="list-style-type: none"> <li>Calculator</li> <li>Computer lab</li> <li><a href="http://www.ridoe.net">www.ridoe.net</a></li> <li><a href="http://www.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>SCHOOL Resource Folder</li> </ul> <p><u>Materials</u></p> <ul style="list-style-type: none"> <li>Unifix cubes</li> <li>3D-solids</li> <li>Rulers (metric),</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li><i>Classroom Instruction That Works</i>, Marzano</li> </ul>	<p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Rubrics</p> <p>Tests/ quizzes</p>
<p>6. COMMUNICATION, CONNECTIONS, AND REPRESENTATION</p> <p>6.4 Mathematical connections</p>		<p>The student will recognize, explore, and develop mathematical connections and be able to:</p> <p>6.4.1 See mathematics as an integrated whole.</p> <p>6.4.2 Recognize relationships among different topics in mathematics.</p> <p>6.4.3 Recognize and use mathematics in other curriculum areas and in their daily lives.</p> <p>6.4.4 Link concepts and procedures.</p> <p>6.4.5 Use mathematical skills, concepts, and applications in other disciplines, e.g.</p> <ul style="list-style-type: none"> <li>graphs in social studies</li> <li>patterns in art</li> </ul>	<p>Teacher may model and/or facilitate the following: (also see pages 1-2)</p> <p><b>Mathematics best practice e.g.</b></p> <ul style="list-style-type: none"> <li>using manipulatives</li> <li>facilitating cooperative group work</li> <li>discussing mathematics</li> <li>questioning and making conjectures</li> <li>justifying of thinking</li> <li>constructing written responses defending the student's mathematics</li> <li>facilitating problem solving approach to instruction</li> <li>integrating content with</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li><i>Everyday Mathematics Grade 2</i></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li><i>Comprehending Math: Adapting Reading Strategies to Teach Math, K-6</i>, Arthur Hyde</li> <li>Mathematics Books by Marilyn Burns</li> <li><i>Exemplars</i></li> <li><i>Problem Solvers</i></li> <li>Box It or Bag It Math</li> <li><i>Teaching Children Mathematics</i>, NCTM</li> <li><i>Comprehensive Math</i></li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>END-OF-YEAR ASSESSMENT (EDM and Problem Solver)</li> <li>PRE AND POST EDM/GLE UNIT TESTS</li> </ul> <p><b>SUGGESTED ASSESSMENTS</b></p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</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"> <li>music and geometry in technology</li> </ul>	<p>other core subjects</p> <ul style="list-style-type: none"> <li>using appropriate technology</li> <li>using frequent assessment to modify instruction</li> <li>modeling functions a calculator</li> </ul> <p>Reading strategies to teach mathematics (Hyde)</p> <ul style="list-style-type: none"> <li>K-W-L</li> <li>visualizing</li> <li>asking strategies</li> <li>inferring</li> <li>predicting</li> <li>making connections</li> <li>determining importance</li> <li>synthesizing</li> </ul>	<p><i>Assessment, Options Pub., Inc</i></p> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Calculator</li> <li>Computer lab</li> <li><a href="http://www.rido.net">www.rido.net</a></li> <li><a href="http://www.rido.net/instruction/curriculum">www.rido.net/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>SCHOOL Resource Folder</li> </ul> <p><u>Materials</u></p> <ul style="list-style-type: none"> <li>Unifix cubes</li> <li>3D-solids</li> <li>Rulers (metric), protractors</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li><i>Classroom Instruction That Works, Marzano</i></li> </ul>	<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>