

# Pre-Algebra, grade 7

Curriculum Writers: Leah Allard, Rob Lloyd, and Connie Oswald

STANDARDS GLE's	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 <u>underlined</u>. Sometimes nothing is underlined within a GLE. In these situations, differences in adjacent grades "assumes increasing text complexity" and is noted for those GLE.</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 Applied Learning Standards (SCANS)</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 Principles of Learning (POL) ®</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 Principles of Disciplinary Literacy</p> <p>Differentiates 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>Analyzes pre-assessment to direct instruction</p> <p>Provides exemplars and rubrics</p> <p>Addresses multiple intelligences and brain</p>	<p><b>Textbook</b></p> <ul style="list-style-type: none"> <li>Impact Mathematics, Course 2</li> </ul> <p><b>Supplementary books</b></p> <ul style="list-style-type: none"> <li>Math Connections</li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>Scientific calculator</li> <li>Overhead scientific calculator</li> <li>Computer lab</li> <li><a href="http://www.glencoe.com">www.glencoe.com</a></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>BMS website (Share Point)</li> </ul> <p><b>Materials</b></p> <p><b>School library resources</b></p> <p><b>Community</b></p>	<p><b>REQUIRED</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON LOCAL ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-TERM EXAM</li> <li>FINAL EXAM</li> <li>QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <p><b>SUGGESTED</b></p> <p>Anecdotal records (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p> <p>Exhibits</p> <p>Interviews</p> <p>Journals/notebooks</p> <p>Graphic organizers and/or visual imagery</p> <p>Journals</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><b>Oral presentations</b></p> <p>Portfolio (samples of process and products)</p> <p><b>Performance/problem-based tasks</b></p> <p>Rubrics</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>MATHEMATIC GLE's/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 include common local assessments (mid-term/final exams) are indicated. 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><b>dominance</b> (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>• <b>constructing written responses defending the student's mathematics</b></li> <li>• facilitating problem solving approach to instruction</li> <li>• <b>integrating content with other core subjects</b></li> <li>• using <b>appropriate technology</b></li> <li>• using <b>frequent</b> assessment to modify instruction</li> <li>• <b>models functions of the scientific calculator</b></li> </ul>		<p>Tests and quizzes</p>

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<p>1. NUMBER and OPERATIONS</p> <p>1.1 Rational numbers</p>		<p>The student</p> <p>1.1.1 Demonstrates conceptual understanding of rational numbers with respect to</p> <ul style="list-style-type: none"> <li>• <u>percents as a means of comparing the same or different parts of the whole when the wholes vary in magnitude e.g., 8 girls in a classroom of 16 students compared to 8 girls in a classroom of 20 students, or 20% of 400 compared to 50% of 100); and</u> <ul style="list-style-type: none"> <li>o rational numbers</li> <li>o percents</li> <li>o proportions</li> <li>o rates</li> </ul> </li> <li>• <u>percents as a way of expressing multiples of a number ( e.g., 200% of 50) using models, explanations, or other representations. (state assessment) (N&amp;O)-7-1</u></li> </ul> <p>1.1.2 Demonstrates conceptual understanding of percents increase and decrease (D) (N&amp;O 8-1)</p> <p>1.1.3 Applies the conventions of order of operations</p> <p>1.1.4 Understands, uses, applies appropriate technology to solve problems</p> <p>1.1.5 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• Math Fair</li> <li>• The Better Airline Deal (suggested)</li> </ul>	<p>Teacher may model and/or facilitate the following strategies (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 the scientific calculator</li> </ul> <ul style="list-style-type: none"> <li>• Differentiated instruction by varying the content, process, and product and implementing             <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> </ul> </li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li>• <a href="#">Impact Mathematics, Course 2</a></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <a href="#">Math Connections</a></li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Scientific calculator</li> <li>• Overhead scientific calculator</li> <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>• <a href="#">NECAP Release tasks</a></li> <li>• <a href="http://NECompact.org">NECompact.org</a></li> <li>• <a href="#">BMS website (Share Point)</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), protractors</li> <li>• Scissors, glue</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><u>Community</u></p>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-TERM EXAM</li> <li>• FINAL EXAM</li> <li>• QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

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			<ul style="list-style-type: none"> <li>cubing, etc.</li> </ul>		
1. NUMBER and OPERATIONS  1.2 Relative magnitude		<p>The student</p> <p>1.2.1 Demonstrates understanding of the relative magnitude of numbers by ordering, or comparing, or identifying</p> <ul style="list-style-type: none"> <li>equivalent rational numbers <u>across number formats</u>,</li> <li>numbers with whole number bases and whole number exponents ( e.g., <math>3^3</math>, <math>4^3</math>),</li> <li>integers,</li> <li><u>absolute values, or</u></li> <li><u>numbers represented in scientific notation</u> using number lines or equality and inequality symbols. <b>(state assessment)</b> (N&amp;O)-7-2</li> <li><u>negative exponents (B)</u> (N&amp;O)-9-2</li> </ul> <p>1.2.2 Applies the conventions of order of operations</p> <p>1.2.3 Understands, uses, applies appropriate technology to solve problems</p> <p>1.2.4 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>Scientific Notation on Your Calculator (p.200)</li> <li>Tower of Hanoi (p. 203) (suggested)</li> </ul>	<p>Teacher may model and/or facilitate the following strategies (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 the scientific calculator</li> </ul> <ul style="list-style-type: none"> <li>Differentiated instruction by varying the content, process, and product and</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li><i>Impact Mathematics, Course 2</i></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li><i>Math Connections</i></li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Scientific calculator</li> <li>Overhead scientific calculator</li> <li>Computer lab</li> <li><a href="http://www.glencoe.com">www.glencoe.com</a></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>BMS website (Share Point)</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> <li>Scissors, glue</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><u>Community</u></p>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>MID-TERM EXAM</li> <li>FINAL EXAM</li> <li>QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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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			implementing <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>		Tests/ quizzes  Visual representation (e.g. Power Point™)
1. NUMBER and OPERATIONS  1.3 Operations		<p>The student</p> <p>1.3.1 Demonstrates conceptual understanding of</p> <ul style="list-style-type: none"> <li>• operations with <u>integers and whole number exponents</u> (where the base is a whole number) using models, diagrams, or explanations. (N&amp;O)-7-3</li> <li>• <u>fractional bases to integer exponents</u> e.g. <math>(\frac{1}{2})^2</math> (B)</li> </ul> <p>1.3.2 Demonstrates conceptual understanding of operations with rational numbers/fraction and computes accurately</p> <ul style="list-style-type: none"> <li>• add</li> <li>• subtract</li> <li>• multiply</li> <li>• divide</li> </ul> <p>1.3.3 Applies the conventions of order of operations</p> <p>1.3.4 Understands, uses, applies appropriate technology to solve problems</p>	<p>Teacher may model and/or facilitate the following strategies (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 the scientific calculator</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li>• <a href="#">Impact Mathematics, Course 2</a></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <a href="#">Math Connections</a></li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Scientific calculator</li> <li>• Overhead scientific calculator</li> <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>• <a href="#">NECAP Release tasks</a></li> <li>• <a href="http://NECompact.org">NECompact.org</a></li> <li>• <a href="#">BMS website (Share Point)</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), protractors</li> <li>• Scissors, glue</li> <li>• Tangrams</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b> <b>REQUIRED PROBLEMS</b> <b>COMMON ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-TERM EXAM</li> <li>• FINAL EXAM</li> <li>• QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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>

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		<p>1.3.5 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• Tangrams Task</li> <li>• Exponent Experience (suggested)</li> <li>• Integers All In A Row (suggested)</li> </ul>	<ul style="list-style-type: none"> <li>• Differentiated instruction by varying the content, process, and product and implementing               <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> </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><u>Community</u></p>	<p>Portfolio (samples of process and products)</p> <p>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>1. NUMBER and OPERATIONS</p> <p>1.4 Solving problems</p>		<p>The student</p> <p>1.4.1 <b>Accurately solves problems</b></p> <ul style="list-style-type: none"> <li>• involving the addition or subtraction of integers,</li> <li>• <u>raising numbers to whole number powers</u></li> <li>• <u>determining square roots of perfect square numbers and non-perfect square numbers.</u> (N&amp;O)-7-4</li> <li>• <u>determining square roots of non perfect squares from 1-144 as between two whole numbers, e.g. <math>\sqrt{50}</math> is between 7 and 8 (D) (N&amp;O 8-4)</u></li> </ul> <p>1.4.2 <b>Applies the conventions of order of operations</b></p> <p>1.4.3 <b>Understands, uses, applies appropriate technology to solve problems</b></p>	<p>Teacher may model and/or facilitate the following strategies (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 the</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li>• <a href="#">Impact Mathematics, Course 2</a></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <a href="#">Math Connections</a></li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Scientific calculator</li> <li>• Overhead scientific calculator</li> <li>• Computer lab</li> <li>• <a href="#">www.glencoe.com</a></li> <li>• <a href="#">www.ridoe.net</a></li> <li>• <a href="#">www.ridoe.ri.gov/instruction/curriculum</a></li> <li>• <a href="#">NECAP Release tasks</a></li> <li>• <a href="#">NECompact.org</a></li> <li>• <a href="#">BMS website (Share Point)</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), protractors</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-TERM EXAM</li> <li>• FINAL EXAM</li> <li>• QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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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		<p>1.4.4 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• Arranging Furniture p. 295</li> <li>• Pirates p. 276 (suggested)</li> </ul>	<p>scientific calculator</p> <ul style="list-style-type: none"> <li>• Differentiated instruction by varying the content, process, and product and implementing               <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> </li> </ul>	<ul style="list-style-type: none"> <li>• Scissors, glue</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>• Classroom Instruction That Works, Marzano</li> </ul> <p><u>Community</u></p>	<p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>1. NUMBER and OPERATIONS</p> <p>1.5 Proportional reasoning, percents, tax, tips, rates</p>		<p>The student</p> <p>1.5.1 <b>Accurately solves problems involving</b></p> <ul style="list-style-type: none"> <li>• proportional reasoning</li> <li>• percents involving discounts</li> <li>• tax</li> <li>• tips</li> <li>• rates (state assessment) (N&amp;O)-7-4</li> <li>• percent markups (D) (N&amp;O) 8-4</li> </ul> <p>1.5.2 <i>Converts between decimals, fractions, and percent</i></p> <p>1.5.3 <i>Applies the conventions of order of operations</i></p> <p>1.5.4 <i>Uses appropriate technology to solve problems</i></p>	<p>Teacher may model and/or facilitate the following strategies (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>• Impact Mathematics, Course 2</li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• Math Connections</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Scientific calculator</li> <li>• Overhead scientific calculator</li> <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>• BMS website (Share Point)</li> </ul> <p><u>Materials</u></p> <ul style="list-style-type: none"> <li>• Unifix cubes</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-TERM EXAM</li> <li>• FINAL EXAM</li> <li>• QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <p><b>SUGGESTED ASSESSMENTS</b></p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p>

# Pre-Algebra, grade 7

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STANDARDS GLE's	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT EVIDENCE
		<p>1.5.5 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>Pool and Track (proportion)</li> <li>Van Gogh p. 546 (proportions) (suggested)</li> <li>Phone Cards p. 315 (rate)</li> <li>Rolling Along p. 312-313 (ratio) (suggested)</li> <li>Popeye's Pizza (tax and tip)</li> </ul>	<ul style="list-style-type: none"> <li>using frequent assessment to modify instruction</li> <li>modeling functions of the scientific calculator</li> <li>Differentiated instruction by varying the content, process, and product and implementing               <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> </li> </ul>	<ul style="list-style-type: none"> <li>3D-solids</li> <li>Rulers (metric), protractors</li> <li>Scissors, glue</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><u>Community</u></p>	<p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>1. NUMBER and OPERATIONS</p> <p>1.6 Estimates</p>		<p><b>The student</b></p> <p>1.6.1 <b>Makes estimates</b> in a given situation (including <u>tips, discounts, tax</u>), by</p> <ul style="list-style-type: none"> <li>identifying when estimation is appropriate,</li> <li>selecting the appropriate method of estimation;</li> <li>determining the level of accuracy needed given the situation; analyzing the effect of the estimation method on the accuracy of results; and</li> <li>evaluating the reasonableness of solutions appropriate to <u>grade level GLE's</u> across content strands. (N&amp;O)-7-7</li> </ul> <p><i>IMPORTANT: The intent of this GLE is to embed estimation throughout the instructional</i></p>	<p><b>Teacher may model and/or facilitate the following strategies (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> </ul>	<p><b>Resources, also see pages 1-2</b></p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li><i>Impact Mathematics, Course 2</i></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li><i>Math Connections</i></li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Scientific calculator</li> <li>Overhead scientific calculator</li> <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> </ul>	<p><b>Assessments/evidence, also see pages 1-2</b></p> <p><b>REQUIRED ASSESSMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-TERM EXAM</li> <li>FINAL EXAM</li> <li>QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <p><b>SUGGESTED ASSESSMENTS</b></p> <p>Anecdotal record (e.g. defends</p>

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		<p><i>program, not to teach it as a separate unit.)</i></p> <p>1.6.2 Applies the conventions of order of operations</p> <p>1.6.3 Understands, uses, applies appropriate technology to solve problems</p> <p>1.6.4 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• Popeye's Pizza Dilemma</li> <li>• Binders</li> </ul>	<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 the scientific calculator</li> <li>• Differentiated instruction by varying the content, process, and product and implementing               <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> </li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">BMS website (Share Point)</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), protractors</li> <li>• Scissors, glue</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><u>Community</u></p>	<p>student generated conjectures in class)</p> <p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>1. NUMBER and OPERATIONS</p> <p>1.7 Properties of numbers</p>		<p>The student</p> <p>1.7.1 Applies properties of numbers</p> <ul style="list-style-type: none"> <li>• odd, even</li> <li>• remainders</li> <li>• divisibility</li> <li>• <u>prime factorization</u></li> <li>• <b>field properties</b> <ul style="list-style-type: none"> <li>○ commutative</li> <li>○ associative</li> <li>○ identity</li> <li>○ distributive</li> </ul> </li> </ul>	<p>Teacher may model and/or facilitate the following strategies (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</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li>• <a href="#">Impact Mathematics, Course 2</a></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <a href="#">Math Connections</a></li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Scientific calculator</li> <li>• Overhead scientific calculator</li> <li>• Computer lab</li> <li>• <a href="http://www.glencoe.com">www.glencoe.com</a></li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-TERM EXAM</li> <li>• FINAL EXAM</li> <li>• QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS</b></p>

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STANDARDS GLE's	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT EVIDENCE
		<p>o inverses (N&amp;O) 7-8</p> <p>1.7.2 <b>Solves problems, simplifies computations, and demonstrates conceptual understanding of field properties as they apply to subsets of real numbers (e.g., the set of whole numbers does not have additive inverses, the set of integers does not have multiplicative inverses).</b> (N&amp;O)-7-8</p> <p>1.7.3 Applies the conventions of order of operations</p> <p>1.7.4 Understands, uses, applies appropriate technology to solve problems</p> <p>1.7.5 Applies properties of divisibility and prime factorization to factor simple expressions, e.g.</p> <ul style="list-style-type: none"> <li>• <math>10x+15=5(2x+3)</math></li> <li>• <math>21a^2+28a=7a(3a+4)</math> (D)</li> </ul> <p>1.7.6 <b>REQUIRED PROBLEM</b></p> <ul style="list-style-type: none"> <li>• Shape and ? p. 67</li> </ul>	<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 the scientific 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> <li>▪</li> </ul>	<ul style="list-style-type: none"> <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>• <a href="#">NECAP Release tasks</a></li> <li>• <a href="http://NECompact.org">NECompact.org</a></li> <li>• <a href="#">BMS website (Share Point)</a></li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>• Unifix cubes</li> <li>• 3D-solids</li> <li>• Rulers (metric), protractors</li> <li>• Scissors, glue</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><b>Community</b></p>	<p><b>COURSE 2</b></p> <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>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>2. <b>GEOMETRY AND MEASUREMENT</b></p> <p>2.1 Angle relationships</p>		<p>The student</p> <p>2.1.1 <b>Recalls and uses properties of angle relationships resulting from two or three intersecting lines</b></p> <ul style="list-style-type: none"> <li>• adjacent angles</li> <li>• vertical angles,</li> <li>• straight angles, or</li> <li>• angle relationships formed by two non-</li> </ul>	<p>Teacher may model and/or facilitate the following strategies (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</li> </ul>	<p>Resources, also see pages 1-2</p> <p><b>Textbook</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Impact Mathematics, Course 2</a></li> </ul> <p><b>Supplementary books</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Math Connections</a></li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Scientific calculator</a></li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-TERM EXAM</li> <li>• FINAL EXAM</li> </ul>

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		<p><u>parallel lines cut by a transversal</u>), or</p> <ul style="list-style-type: none"> <li>two parallel lines cut by a transversal to solve problems. (state assessment) (G&amp;M)-7-1</li> </ul> <p>2.1.2 Understands, uses, applies appropriate technology to solve problems</p> <p>2.1.3 <b>REQUIRED PROBLEM</b></p> <ul style="list-style-type: none"> <li>Angle Relationships</li> </ul>	<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 the scientific calculator</li> <li>Differentiated instruction by varying the content, process, and product and implementing               <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> </li> </ul>	<ul style="list-style-type: none"> <li>Overhead scientific calculator</li> <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>BMS website (Share Point)</li> <li>Geometers Sketch Pad</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> <li>Scissors, glue</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>Classroom Instruction That Works, Marzano</li> </ul> <p><u>Community</u></p>	<ul style="list-style-type: none"> <li>QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>2. GEOMETRY AND MEASUREMENT</p> <p>2.2 Theorem or relationships</p>		<p>The student</p> <p>2.2.1 Applies theorem or relationships (triangle inequality or sum of the measures of interior angles of regular polygons) to solve problems. (state assessment) (G&amp;M)-7-2</p>	<p>Teacher may model and/or facilitate the following strategies (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</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li>Impact Mathematics, Course 2</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESSMENTS</b></p>

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		<p>2.2.2 Applies Pythagorean Theorem to find a missing side of a right triangle or in problem solving situations (D) (G&amp;M)-8-2</p> <p>2.2.3 Applies the conventions of order of operations</p> <p>2.2.4 Understands, uses, applies appropriate technology to solve problems</p> <p>2.2.5 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• Arranging Furniture p. 295</li> <li>• Dr. Diggenu p. 268 and 271</li> <li>• Angles, Angles, Angles, p 475</li> </ul>	<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 the scientific calculator</li> </ul> <ul style="list-style-type: none"> <li>• Differentiated instruction by varying the content, process, and product and implementing             <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> </li> </ul>	<p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <i>Math Connections</i></li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Scientific calculator</li> <li>• Overhead scientific calculator</li> <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>• <b>NECAP Release tasks</b></li> <li>• <b>NECompact.org</b></li> <li>• BMS website (Share Point)</li> <li>• Geometers Sketch Pad</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> <li>• Scissors, glue</li> <li>• Graph paper</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><u>Community</u></p>	<ul style="list-style-type: none"> <li>• <b>MID-TERM EXAM</b></li> <li>• <b>FINAL EXAM</b></li> <li>• <b>QUARTERLY (MS only)</b></li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

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<p>3 GEOMETRY AND MEASUREMENT</p> <p>2.3 Congruency</p>		<p>The student</p> <p>2.3.1 <u>Applies the concepts of congruency by solving problems on a coordinate plane involving</u></p> <ul style="list-style-type: none"> <li>• <u>reflections,</u></li> <li>• <u>translations, or</u></li> <li>• <u>rotations. (state assessment) (G&amp;M)-7-4</u></li> </ul> <p>2.3.2 Understands, uses, applies appropriate technology to solve problems</p> <p>2.3.3 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• Problem Set C and Share an Summarize p. 453</li> <li>• Connect and Extend p. 467</li> </ul>	<p>Teacher may model and/or facilitate the following strategies (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 the scientific calculator</li> <li>• Differentiated instruction by varying the content, process, and product and implementing             <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> </ul> </li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li>• <i>Impact Mathematics, Course 2</i></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <i>Math Connections</i></li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Scientific calculator</li> <li>• Overhead scientific calculator</li> <li>• Computer lab</li> <li>• <a href="http://www.glencoe.com">www.glencoe.com</a></li> <li>• <a href="http://www.ri.doe.net">www.ri.doe.net</a></li> <li>• <a href="http://www.ri.doe.net/instruction/curriculum">www.ri.doe.net/instruction/curriculum</a></li> <li>• <b>NECAP Release tasks</b></li> <li>• <b>NECompact.org</b></li> <li>• BMS website (Share Point)</li> <li>• Geometers Sketch Pad</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> <li>• Scissors, glue</li> <li>• MIRA</li> <li>• Graph paper</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>• Donald in Mathmagic Land - video</li> <li>• <i>Classroom Instruction That Works</i>, Marzano</li> </ul> <p><u>Community</u></p>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-TERM EXAM</li> <li>• FINAL EXAM</li> <li>• QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

# Pre-Algebra, grade 7

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STANDARDS GLE's	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>cubing, etc.</li> </ul>		
<p><b>4 GEOMETRY AND MEASUREMENT</b></p> <p>2.4 Similarity</p>		<p>The student</p> <p>2.4.1 <b>Applies concepts of similarity</b> by solving <u>problems</u> involving</p> <ul style="list-style-type: none"> <li>scaling up or down and their impact on angle measures,</li> <li>linear dimensions and</li> <li><u>areas of polygons, and circles when the linear dimensions are multiplied by a constant factor. (state assessment)</u> (G&amp;M)-7-5</li> </ul> <p>2.4.2 Describes effects using models or<sup>sc</sup> explanations. <b>(state assessment)</b> (G&amp;M)-7-5</p> <p>2.4.3 <b>Applies the conventions of order of operations</b></p> <p>2.4.4 <b>Understands, uses, applies appropriate technology to solve problems</b></p> <p>2.4.5 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>Two Triangles</li> <li>Investigation # 3 p. 489-494</li> </ul>	<p>Teacher may model and/or facilitate the following strategies (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 the graphing and scientific calculator</li> <li>Differentiated instruction by varying the content,</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li><i>Impact Mathematics, Course 2</i></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li><i>Math Connections</i></li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Scientific calculator</li> <li>Overhead scientific calculator</li> <li>Computer lab</li> <li><a href="http://www.glencoe.com">www.glencoe.com</a></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>BMS website (Share Point)</li> <li>Geometers Sketch Pad</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> <li>Scissors, glue</li> <li>Graph paper</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>Donald in Mathmagic</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>MID-TERM EXAM</li> <li>FINAL EXAM</li> <li>QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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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			process, and product and implementing <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>	<ul style="list-style-type: none"> <li>• Land - video</li> <li>• Classroom Instruction That Works, Marzano</li> <li>• Math Who Needs It? (video)</li> </ul> <p><u>Community</u></p>	Tests/quizzes  Visual representation (e.g. Power Point™)
2. GEOMETRY AND MEASUREMENT  2.5 Area of circles, perimeter of composit figures		<p>The student</p> <p>2.5.1 Demonstrates conceptual understanding of the</p> <ul style="list-style-type: none"> <li>• area of circles or the area or perimeter of composite figures                             <ul style="list-style-type: none"> <li>○ quadrilaterals</li> <li>○ triangles, or</li> <li>○ parts of circles</li> </ul> </li> <li>• surface area of rectangular prisms, or</li> <li>• volume of rectangular prisms,</li> <li>• triangular prisms, or</li> <li>• cylinders using models, formulas, or</li> <li>• by solving related problems <b>state assessment</b> (G&amp;M)-7-6</li> </ul> <p>2.5.2 Expresses all measures using appropriate units. <b>(state assessment)</b> (G&amp;M)-7-6</p> <p>2.5.3 Demonstrates conceptual understanding of pyramids and cones <b>(D)</b> (G&amp;M)-8-6</p> <p>2.5.4 Applies the conventions of order of operations</p>	<p>Teacher may model and/or facilitate the following strategies (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 the scientific calculator</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li>• Impact Mathematics, Course 2</li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• Math Connections</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Scientific calculator</li> <li>• Overhead scientific calculator</li> <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.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>• NECAP Release tasks</li> <li>• NECompact.org</li> <li>• BMS website (Share Point)</li> <li>• Geometers Sketch Pad</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> <li>• Scissors, glue</li> <li>• Compass</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-TERM EXAM</li> <li>• FINAL EXAM</li> <li>• QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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>2.5.5 Understands, uses, applies appropriate technology to solve problems</p> <p>2.5.6 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• BMS Soccer Field</li> <li>• Tiling a Floor (suggested)</li> <li>• Cubes</li> <li>• Cubic Aquariums (suggested)</li> <li>• Design a Corral (suggested)</li> </ul>	<ul style="list-style-type: none"> <li>• Differentiated instruction by varying the content, process, and product and implementing               <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> </li> </ul>	<p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>• Donald in Mathmagic Land - video</li> <li>• Classroom Instruction That Works, Marzano</li> <li>• Math Who Needs It? (video)</li> </ul> <p><u>Community</u></p>	<p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>2. GEOMETRY AND MEASUREMENT</p> <p>2.6 Spatial reasoning and visualization</p>		<p>The student</p> <p>2.6.1 <b>Demonstrates conceptual understanding of spatial reasoning and visualization by</b></p> <ul style="list-style-type: none"> <li>• <u>sketching three-dimensional solids; and</u></li> <li>• <u>drawing nets of rectangular and triangular prisms, cylinders, and pyramids and</u></li> <li>• <u>using the nets as technique for finding surface area.</u> (G&amp;M)-7-10</li> <li>• <u>nets of pyramids (G&amp;M)-8-6)</u></li> <li>• <u>tessellations</u></li> </ul> <p>2.6.2 Understands, uses, applies appropriate technology to solve problems</p> <p>2.6.3 <b>BENCHMARK PROBLEM</b></p> <ul style="list-style-type: none"> <li>• Lana's Ice Cream Parlor, p. 139, # 20</li> </ul>	<p>Teacher may model and/or facilitate the following strategies (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>Impact Mathematics, Course 2</i></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <i>Math Connections</i></li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Scientific calculator</li> <li>• Overhead scientific calculator</li> <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>• BMS website (Share Point)</li> <li>• Geometers Sketch Pad</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-TERM EXAM</li> <li>• FINAL EXAM</li> <li>• QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <p><b>SUGGESTED ASSESMENTS</b></p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p>

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			<ul style="list-style-type: none"> <li>modeling functions of the scientific calculator</li> <li>Differentiated instruction by varying the content, process, and product and implementing               <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> </li> </ul>	<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>Unifix cubes</li> <li>3D-solids</li> <li>Rulers (metric), protractors</li> <li>Scissors, glue</li> </ul> <p><b>School library resources</b></p> <ul style="list-style-type: none"> <li>Donald in Mathmagic Land - video</li> <li>Classroom Instruction That Works, Marzano</li> <li>Math Who Needs It? (video)</li> </ul> <p><b>Community</b></p>	<p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>3. FUNCTIONS AND ALGEBRA</p> <p>3.1 Variety of patterns</p>		<p>The student</p> <p>3.1.1 Identifies and extends to specific cases a variety of patterns (linear and nonlinear) represented in models, tables, sequences, graphs, or in problem situations; and</p> <ul style="list-style-type: none"> <li>generalizes a linear relationship using words and symbols; generalizes a linear relationship to find a specific case; or</li> <li>writes an expression or<sup>sc</sup></li> <li>equation using words or<sup>sc</sup></li> <li>symbols</li> </ul> <p>to express the generalization of a nonlinear relationship. (state assessment) (F&amp;A)-7-1</p> <p>3.1.2 Creates and extends tables from patterns</p>	<p>Teacher may model and/or facilitate the following strategies (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> </ul>	<p>Resources, also see pages 1-2</p> <p><b>Textbook</b></p> <ul style="list-style-type: none"> <li>Impact Mathematics, Course 2</li> </ul> <p><b>Supplementary books</b></p> <ul style="list-style-type: none"> <li>Math Connections</li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>Scientific calculator</li> <li>Overhead scientific calculator</li> <li>Computer lab</li> <li>www.glencoe.com</li> <li>www.ridoe.net</li> <li>www.ridoe.net/instruction/curriculum</li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>BMS website (Share Point)</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>MID-TERM EXAM</li> <li>FINAL EXAM</li> <li>QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <p><b>SUGGESTED ASSESMENTS</b></p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p>

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		<p>3.1.3 Creates patterns from tables and linear relationships</p> <p>3.1.4 Applies the conventions of order of operations</p> <p>3.1.5 Understands, uses, applies appropriate technology to solve problems</p> <p>3.1.6 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>• Stars</li> <li>• Hexagons</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 the scientific calculator</li> <li>• Differentiated instruction by varying the content, process, and product and implementing               <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> </li> </ul>	<p><u>Materials</u></p> <ul style="list-style-type: none"> <li>• Pattern tiles</li> <li>• Unifix cubes</li> <li>• 3D-solids</li> <li>• Rulers (metric), protractors</li> <li>• Scissors, glue</li> <li>• paper lunch bag</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>• Donald in Mathmagic Land - video</li> <li>• Classroom Instruction That Works, Marzano</li> <li>• Math Who Needs It? (video)</li> </ul> <p><u>Community</u></p>	<p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>4. FUNCTIONS AND ALGEBRA</p> <p>Linear relationships</p>		<p>The student</p> <p>3.2.1 Accurately works with coordinate (Cartesian) Plane</p> <ul style="list-style-type: none"> <li>• Plot points</li> <li>• Identify origin and four quadrants</li> <li>• Read coordinates from graph</li> </ul> <p>3.2.2 Recognizes the concepts of:</p> <ul style="list-style-type: none"> <li>• slope</li> <li>• Y- intercepts</li> </ul> <p>3.2.3 Demonstrates conceptual understanding of linear relationships (<math>y = kx</math>, <math>y = mx + b</math>) as a constant rate of change by</p>	<p>Teacher may model and/or facilitate the following strategies (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></p> <ul style="list-style-type: none"> <li>• Impact Mathematics, Course 2</li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• Math Connections</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Scientific calculator</li> <li>• Overhead scientific calculator</li> <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> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESSMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-TERM EXAM</li> <li>• FINAL EXAM</li> <li>• QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <p><b>SUGGESTED ASSESSMENTS</b></p>

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STANDARDS GLE's	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>solving problems involving the relationship between slope and rate of change</li> <li>describing the meaning of slope in concrete situations, or</li> <li>informally determining the slope of a line from a table or graph; <b>and</b></li> <li><b>distinguishing between constant and varying rates</b> of change in concrete situations represented in tables or graphs; <b>or</b></li> <li><b>describing how change in the value of one variable relates to change in the value of a second variable</b> in problem situations with constant rates of change. (<b>state assessment</b>) (F&amp;A)-7-2</li> </ul> <p>3.2.4 Formally determines slope and y-intercepts by finding;</p> <ul style="list-style-type: none"> <li>slope from two points</li> <li>slope from table or graph</li> <li>slope from an equation of the form <math>cx+dy=e</math></li> </ul> <p>3.2.5 Applies the conventions of order of operations</p> <p>3.2.6 Understands, uses, applies appropriate technology to solve problems</p> <p>3.2.7 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>Mystery Graph (suggested)</li> <li>New Bikes</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 the scientific calculator</li> </ul> <ul style="list-style-type: none"> <li>Differentiated instruction by varying the content, process, and product and implementing             <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> </li> </ul>	<ul style="list-style-type: none"> <li><a href="#">NECompact.org</a></li> <li><a href="#">BMS website (Share Point)</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), protractors</li> <li>scissors, glue</li> <li>graph paper</li> <li>paper lunch bag</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>Donald in Mathmagic Land - video</li> <li>Classroom Instruction That Works, Marzano</li> <li>Math Who Needs It? (video)</li> </ul> <p><u>Community</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>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

# Pre-Algebra, grade 7

Curriculum Writers: Leah Allard, Rob Lloyd, and Connie Oswald

STANDARDS GLE's	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT EVIDENCE
<p>3. FUNCTIONS AND ALGEBRA</p> <p>3.3 Algebraic expressions</p>		<p>The student</p> <p>3.3.1 <b>Demonstrates conceptual understanding of algebraic expressions</b> by</p> <ul style="list-style-type: none"> <li>using letters to represent unknown quantities to write algebraic expressions (including those with whole number exponents or more than one variable); or</li> <li>evaluating algebraic expressions (including those with whole number exponents or more than one variable); or</li> <li>evaluating an expression within an equation (e.g., determine the value of <math>y</math> when <math>x=4</math> given <math>y=5x^3-2</math>). <b>(state assessment)</b> (F&amp;A)-7-3</li> </ul> <p>3.3.2 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>Row of Houses p. 10</li> <li>T-shirt Fund Raiser</li> </ul>	<p>Teacher may model and/or facilitate the following strategies (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 the scientific calculator</li> </ul> <ul style="list-style-type: none"> <li>Differentiated instruction by varying the content, process, and product and implementing             <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> </ul> </li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li><i>Impact Mathematics, Course 2</i></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li><i>Math Connections</i></li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Scientific calculator</li> <li>Overhead scientific calculator</li> <li>Computer lab</li> <li><a href="http://www.glencoe.com">www.glencoe.com</a></li> <li><a href="http://www.ri.oe.net">www.ri.oe.net</a></li> <li><a href="http://www.ri.oe.net/instruction/curriculum">www.ri.oe.net/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>BMS website (Share Point)</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> <li>Scissors, glue</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>Donald in Mathmagic Land - video</li> <li><i>Classroom Instruction That Works</i>, Marzano</li> <li><i>Math Who Needs It?</i> (video)</li> </ul> <p><u>Community</u></p>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>MID-TERM EXAM</li> <li>FINAL EXAM</li> <li>QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

# Pre-Algebra, grade 7

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STANDARDS GLE's	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>cubing, etc.</li> </ul>		
<p>3. FUNCTIONS AND ALGEBRA</p> <p>3.4 Equality</p>		<p>The student</p> <p>3.4.1 Demonstrates conceptual understanding of equality by</p> <ul style="list-style-type: none"> <li>showing equivalence between two expressions (<u>expressions consistent with the parameters of the left- and right-hand sides of the equations being solved at this grade level</u>)</li> <li>using models or different representations of the expressions,</li> <li>solving multi-step linear equations of the form <math>ax \pm b = c \neq</math> with <math>a \neq 0</math>, <math>ax \pm b = cx \pm d</math> with <math>a, c \neq 0</math>, and <math>(x/a) \pm b = c</math> with <math>a \neq 0</math>, where <math>a, b, c</math> and <math>d</math> are whole numbers;</li> <li>or <u>by translating a problem-solving situation into an equation consistent with the parameters of the type of equations being solved for this grade level. (state assessment)</u>. M(F&amp;A)-7-4</li> </ul> <p>3.4.1 Applies the conventions of order of operations</p> <p>3.4.2 Understands, uses, applies appropriate technology to solve problems</p> <p>3.4.3 <b>REQUIRED PROBLEM</b></p> <ul style="list-style-type: none"> <li>Think of a Number p. 447</li> </ul>	<p>Teacher may model and/or facilitate the following strategies (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 the scientific calculator</li> </ul> <ul style="list-style-type: none"> <li>Differentiated instruction by varying the content, process, and product and implementing             <ul style="list-style-type: none"> <li>tiered assignments</li> <li>jigsawing</li> </ul> </li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li>Impact Mathematics, Course 2</li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>Math Connections</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Scientific calculator</li> <li>Overhead scientific calculator</li> <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>BMS website (Share Point)</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> <li>Scissors, glue</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>Donald in Mathmagic Land - video</li> <li>Classroom Instruction That Works, Marzano</li> <li>Math Who Needs It? (video)</li> </ul> <p><u>Community</u></p>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-TERM EXAM</li> <li>FINAL EXAM</li> <li>QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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>Tests/quizzes</p>

# Pre-Algebra, grade 7

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STANDARDS GLE's	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>▪ pre/post assessments</li> <li>▪ anchoring</li> <li>▪ think/pair/share</li> <li>▪ cubing, etc.</li> </ul>		Visual representation (e.g. Power Point™)
<p>4. DATA, STATISTICS, AND PROBABILITY</p> <p>4.1 Given representation</p>		<p>The student</p> <p>4.1.1 Interprets a given representation (circle graphs, scatter plots that represent discrete linear relationships, or histograms (DSP)-7-1 and "box and whisker" (D) DSP)-8-1to</p> <ul style="list-style-type: none"> <li>• analyze the data to formulate or justify conclusions,</li> <li>• make predictions, or</li> <li>• solve problems. (state assessment) (DSP)-7-1</li> </ul> <p>4.1.2 Applies the conventions of order of operations</p> <p>4.1.3 Understands, uses, applies appropriate technology to solve problems</p>	<p>Teacher may model and/or facilitate the following strategies (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 the scientific calculator</li> </ul> <ul style="list-style-type: none"> <li>• Differentiated instruction by varying the content, process, and product and</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li>• <a href="#">Impact Mathematics, Course 2</a></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <a href="#">Math Connections</a></li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Scientific calculator</li> <li>• Overhead scientific calculator</li> <li>• Computer lab</li> <li>• <a href="http://www.glencoe.com">www.glencoe.com</a></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>• <a href="#">NECAP Release tasks</a></li> <li>• <a href="http://NECompact.org">NECompact.org</a></li> <li>• <a href="#">BMS website (Share Point)</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), protractors</li> <li>• Scissors, glue</li> <li>• Dice</li> <li>• Spinners</li> <li>• Two-colored Chips</li> </ul> <p><u>School library resources</u></p>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-TERM EXAM</li> <li>• FINAL EXAM</li> <li>• QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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 GLE's	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT EVIDENCE
			implementing <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>	<ul style="list-style-type: none"> <li>• Donald in Mathmagic Land - video</li> <li>• Classroom Instruction That Works, Marzano</li> <li>• Math Who Needs It? (video)</li> </ul> Community	Tests/quizzes  Visual representation (e.g. Power Point™)
4. DATA, STATISTICS, AND PROBABILITY  4.2 Patterns, trends, distributions		The student <p>4.2.1 Analyzes patterns, trends, or distributions in data in a variety of contexts by solving problems using</p> <ul style="list-style-type: none"> <li>• measures of central tendency (mean, median, or mode),</li> <li>• dispersion (range or variation), or</li> <li>• outliers to analyze situations to determine their effect on mean, median, or mode; (state assessment) (DSP)-7-2</li> <li>• quartile values (DSP)-8-2</li> </ul> <p>4.2.2 Evaluates the sample from which the statistics were developed</p> <ul style="list-style-type: none"> <li>• bias (state assessment) (DSP)-7-2</li> <li>• random</li> <li>• non random (D) (DSP)-8-2</li> </ul> <p>4.2.3 Applies the conventions of order of operations</p> <p>4.2.4 Understands, uses, applies appropriate technology to solve problems</p>	Teacher may model and/or facilitate the following strategies (also see pages 1-2)  Mathematics best practice e.g. <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 the scientific calculator</li> </ul>	Resources, also see pages 1-2  <u>Textbook</u> <ul style="list-style-type: none"> <li>• Impact Mathematics, Course 2</li> </ul> <u>Supplementary books</u> <ul style="list-style-type: none"> <li>• Math Connections</li> </ul> <u>Technology</u> <ul style="list-style-type: none"> <li>• Scientific calculator</li> <li>• Overhead scientific calculator</li> <li>• Computer lab</li> <li>• www.glencoe.com</li> <li>• www.ridoe.net</li> <li>• www.ridoe.net/instruction/curriculum</li> <li>• NECAP Release tasks</li> <li>• NECompact.org</li> <li>• BMS website (Share Point)</li> </ul> <u>Materials</u> <ul style="list-style-type: none"> <li>• Unifix cubes</li> <li>• 3D-solids</li> <li>• Rulers (metric), protractors</li> <li>• Scissors, glue</li> <li>• Dice</li> <li>• Spinners</li> </ul>	Assessments/evidence, also see pages 1-2  <u>REQUIRED ASSESMENTS</u> <u>REQUIRED PROBLEMS</u> <u>COMMON ASSESMENTS</u> <ul style="list-style-type: none"> <li>• MID-TERM EXAM</li> <li>• FINAL EXAM</li> <li>• QUARTERLY (MS only)</li> </ul> <u>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</u>  <u>SUGGESTED ASSESMENTS</u> Anecdotal record (e.g. defends student generated conjectures in class)  Conferencing  Journals/notebooks  Oral presentation

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STANDARDS GLE's	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT EVIDENCE
		<p>4.2.5 <b>REQUIRED PROBLEM</b></p> <ul style="list-style-type: none"> <li>Doug's Survey, p 267</li> </ul>	<ul style="list-style-type: none"> <li>Differentiated instruction by varying the content, process, and product and implementing               <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> </li> </ul>	<ul style="list-style-type: none"> <li>Two-colored Chips</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>Donald in Mathmagic Land - video</li> <li>Classroom Instruction That Works, Marzano</li> <li>Math Who Needs It? (video)</li> </ul> <p><u>Community</u></p>	<p>Portfolio (samples of process and products)</p> <p>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p><b>4. DATA, STATISTICS, AND PROBABILITY</b></p> <p>4.3 Organizes and displays data</p>		<p><b>The student</b></p> <p>4.3.1 <b>Organizes and displays data</b> using tables, line graphs, scatter plots, and circle graphs to</p> <ul style="list-style-type: none"> <li>answer questions related to the data,</li> <li>analyze the data to formulate or</li> <li>justify conclusions,</li> <li>make predictions</li> <li>solve problems. (DSP)-7-3</li> </ul> <p>4.3.2 Applies the conventions of order of operations</p> <p>4.3.3 Understands, uses, applies appropriate technology to solve problems</p> <p>4.3.4 <b>REQUIRED PROBLEM</b></p> <ul style="list-style-type: none"> <li>Vegetable Garden (may need differentiation)</li> </ul>	<p>Teacher may model and/or facilitate the following strategies (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>Impact Mathematics, Course 2</li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>Math Connections</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Scientific calculator</li> <li>Overhead scientific calculator</li> <li>Computer lab</li> <li>www.glencoe.com</li> <li>www.ride.net</li> <li>www.ride.ri.gov/instruction/curriculum</li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>BMS website (Share Point)</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>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>MID-TERM EXAM</li> <li>FINAL EXAM</li> <li>QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <p><b>SUGGESTED ASSESMENTS</b></p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p> <p>Conferencing</p>

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STANDARDS GLE's	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>modeling functions of the scientific calculator</li> <li>Differentiated instruction by varying the content, process, and product and implementing               <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> </li> </ul>	<ul style="list-style-type: none"> <li>protractors</li> <li>Scissors, glue</li> <li>Dice</li> <li>Spinners</li> <li>Two-colored Chips</li> <li><u>School library resources</u> <ul style="list-style-type: none"> <li>Donald in Mathmagic Land - video</li> <li>Classroom Instruction That Works, Marzano</li> <li>Math Who Needs It? (video)</li> </ul> </li> <li><u>Community</u></li> </ul>	<p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p><b>4. DATA, STATISTICS, AND PROBABILITY</b></p> <p>4.4. Representations</p>		<p>The student</p> <p>4.4.1 Identifies or describes representations or elements of representations that best display a given set of data or situation, consistent with the representations required in M(DSP)-7-1. (DSP)-7-3</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>New Bikes (defend data display)</li> <li>Jenny's Survey p.706 (suggested)</li> </ul>	<p>Teacher may model and/or facilitate the following strategies (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> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li>Impact Mathematics, Course 2</li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>Math Connections</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Scientific calculator</li> <li>Overhead scientific calculator</li> <li>Computer lab</li> <li>www.glencoe.com</li> <li>www.ridoe.net</li> <li>www.ridoe.net/instruction/curriculum</li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>BMS website (Share Point)</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>MID-TERM EXAM</li> <li>FINAL EXAM</li> <li>QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <p><b>SUGGESTED ASSESMENTS</b></p> <p>Anecdotal record (e.g. defends student generated conjectures in class)</p>

# Pre-Algebra, grade 7

Curriculum Writers: Leah Allard, Rob Lloyd, and Connie Oswald

STANDARDS GLE's	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 appropriate technology</li> <li>using frequent assessment to modify instruction</li> <li>modeling functions of the scientific calculator</li> <li>Differentiated instruction by varying the content, process, and product and implementing               <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> </li> </ul>	<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>Unifix cubes</li> <li>3D-solids</li> <li>Rulers (metric), protractors</li> <li>Scissors, glue</li> <li>Dice</li> <li>Spinners</li> <li>Two-colored Chips</li> </ul> <p><b>School library resources</b></p> <ul style="list-style-type: none"> <li>Donald in Mathmagic Land - video</li> <li>Classroom Instruction That Works, Marzano</li> <li>Math Who Needs It? (video)</li> </ul> <p><b>Community</b></p>	<p>Conferencing</p> <p>Journals/notebooks</p> <p>Oral presentation</p> <p>Portfolio (samples of process and products)</p> <p>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p><b>4. DATA, STATISTICS, AND PROBABILITY</b></p> <p>4.5 Counting techniques</p>		<p>The student</p> <p>4.5.1 Uses counting techniques to solve problems in context</p> <ul style="list-style-type: none"> <li>involving combinations or permutations (e.g., How many different ways can eight students place first, second, and third in a race?)</li> <li>using a variety of strategies e.g.           <ul style="list-style-type: none"> <li>organized lists</li> <li>tables</li> <li>tree diagrams</li> <li>models</li> <li>Fundamental Counting Principle, or<sup>sc</sup> others). (DSP)-7-4</li> </ul> </li> </ul>	<p>Teacher may model and/or facilitate the following strategies (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> <ul style="list-style-type: none"> <li>Impact Mathematics, Course 2</li> </ul> <p><b>Supplementary books</b></p> <ul style="list-style-type: none"> <li>Math Connections</li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>Scientific calculator</li> <li>Overhead scientific calculator</li> <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> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-TERM EXAM</li> <li>FINAL EXAM</li> <li>QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <p><b>SUGGESTED ASSESSMENTS</b></p>

# Pre-Algebra, grade 7

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STANDARDS GLE's	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT EVIDENCE
		<p>4.5.2 Applies the conventions of order of operations</p> <p>4.5.3 Understands, uses, applies appropriate technology to solve problems</p> <p>4.5.4 <b>REQUIRED PROBLEM</b></p> <ul style="list-style-type: none"> <li>• Odd or Even</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 the scientific calculator</li> <li>• Differentiated instruction by varying the content, process, and product and implementing               <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> </li> </ul>	<ul style="list-style-type: none"> <li>• <a href="http://NECompact.org">NECompact.org</a></li> <li>• <a href="#">BMS website (Share Point)</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), protractors</li> <li>• Scissors, glue</li> <li>• Dice</li> <li>• Spinners</li> <li>• Two-colored Chips</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>• Donald in Mathmagic Land - video</li> <li>• Classroom Instruction That Works, Marzano</li> <li>• Math Who Needs It? (video)</li> </ul> <p><u>Community</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>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<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>• predicts the theoretical probability of an event and tests the prediction through experiments and simulations;</li> <li>• compares and contrasts theoretical and experimental probabilities;</li> <li>• finds the odds of an event and understands the relationship between</li> </ul>	<p>Teacher may model and/or facilitate the following strategies (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> <ul style="list-style-type: none"> <li>• <a href="#">Impact Mathematics, Course 2</a></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <a href="#">Math Connections</a></li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Scientific calculator</li> <li>• Overhead scientific calculator</li> <li>• Computer lab</li> <li>• <a href="http://www.glencoe.com">www.glencoe.com</a></li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-TERM EXAM</li> <li>• FINAL EXAM</li> <li>• QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS</b></p>

# Pre-Algebra, grade 7

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STANDARDS GLE's	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT EVIDENCE
		<p>probability and odds. (DSP)-7-5</p> <p>4.6.2 Understands, uses, applies appropriate technology to solve problems</p> <p>4.6.3 <b>REQUIRED PROBLEM</b></p> <ul style="list-style-type: none"> <li>Dart Board (may need differentiation)</li> </ul>	<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 the scientific calculator</li> <li>Differentiated instruction by varying the content, process, and product and implementing               <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> </li> </ul>	<ul style="list-style-type: none"> <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>BMS website (Share Point)</li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>Unifix cubes</li> <li>3D-solids</li> <li>Rulers (metric), protractors</li> <li>Scissors, glue</li> <li>Dice</li> <li>Spinners</li> <li>Two-colored Chips</li> </ul> <p><b>School library resources</b></p> <ul style="list-style-type: none"> <li>Donald in Mathmagic Land - video</li> <li>Classroom Instruction That Works, Marzano</li> <li>Math Who Needs It? (video)</li> </ul> <p><b>Community</b></p>	<p><b>COURSE 2</b></p> <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>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p>4. DATA, STATISTICS, AND PROBABILITY</p> <p>4.7 Probability event</p>		<p>The student</p> <p>4.7.1 For a probability event in which the sample space may or may not contain equally likely outcomes, determines the experimental or theoretical probability of an event in a problem-solving situation. (state assessment) (DSP)-7-5</p> <p>4.7.2 Applies the conventions of order of operations</p>	<p>Teacher may model and/or facilitate the following strategies (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> </ul>	<p>Resources, also see pages 1-2</p> <p><b>Textbook</b></p> <ul style="list-style-type: none"> <li>Impact Mathematics, Course 2</li> </ul> <p><b>Supplementary books</b></p> <ul style="list-style-type: none"> <li>Math Connections</li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>Scientific calculator</li> <li>Overhead scientific</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-TERM EXAM</li> <li>FINAL EXAM</li> <li>QUARTERLY (MS only)</li> </ul>

# Pre-Algebra, grade 7

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STANDARDS GLE's	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT EVIDENCE
		<p>4.7.3 Understands, uses, applies appropriate technology to solve problems</p> <p>4.7.4 <b>REQUIRED PROBLEM</b></p> <ul style="list-style-type: none"> <li>Traffic Lights (suggested)</li> </ul>	<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 the scientific calculator</li> <li>Differentiated instruction by varying the content, process, and product and implementing               <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> </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.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>BMS website (Share Point)</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> <li>Scissors, glue</li> <li>Dice</li> <li>Spinners</li> <li>Two-colored Chips</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>Donald in Mathmagic Land - video</li> <li>Classroom Instruction That Works, Marzano</li> <li>Math Who Needs It? (video)</li> </ul> <p><u>Community</u></p>	<p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
<p><b>4. DATA, STATISTICS, AND PROBABILITY</b></p> <p>4.8 Teacher or student generated</p>		<p>The student</p> <p>4.8.1 <b>In response to a teacher or student generated question or hypothesis</b></p> <ul style="list-style-type: none"> <li>decides the most effective method (e.g., survey, observation, experimentation) to collect the data (numerical or categorical) necessary to answer the question;</li> </ul>	<p>Teacher may model and/or facilitate the following strategies (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><u>Textbook</u></p> <ul style="list-style-type: none"> <li>Impact Mathematics, Course 2</li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>Math Connections</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-TERM EXAM</li> <li>FINAL EXAM</li> </ul>

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question or hypothesis		<ul style="list-style-type: none"> <li>collects, organizes, and appropriately displays the data;</li> <li>analyzes the data to draw conclusions about the question or hypothesis being tested while considering the limitations that could affect interpretations; and</li> <li>when appropriate makes predictions; and asks new questions and makes connections to real world situations. (DSP)-7-6</li> </ul> <p>4.8.2 Understands, uses, applies appropriate technology to solve problems</p> <p>4.8.3 <b>REQUIRED PROBLEMS</b></p> <ul style="list-style-type: none"> <li>A Lady or the Tiger (suggested)</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 the scientific calculator</li> <li>Differentiated instruction by varying the content, process, and product and implementing               <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> </li> </ul>	<p><b>Technology</b></p> <ul style="list-style-type: none"> <li>Scientific calculator</li> <li>Overhead scientific calculator</li> <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.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>BMS website (Share Point)</li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>Unifix cubes</li> <li>3D-solids</li> <li>Rulers (metric), protractors</li> <li>Scissors, glue</li> <li>Dice</li> <li>Spinners</li> <li>Two-colored Chips</li> </ul> <p><b>School library resources</b></p> <ul style="list-style-type: none"> <li>Donald in Mathmagic Land - video</li> <li>Classroom Instruction That Works, Marzano</li> <li>Math Who Needs It? (video)</li> </ul> <p><b>Community</b></p>	<ul style="list-style-type: none"> <li><b>QUARTERLY (MS only)</b></li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>
5. <b>PROBLEM SOLVING, REASONING, AND PROOF</b>		Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content and be able to:	<p>Teacher may model and/or facilitate the following strategies (also see pages 1-2)</p> <p>Mathematics best practice e.g.</p> <ul style="list-style-type: none"> <li>using manipulatives</li> </ul>	<p>Resources, also see pages 1-2</p> <p><b>Textbook</b></p> <ul style="list-style-type: none"> <li>Impact Mathematics, Course 2</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p>

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Curriculum Writers: Leah Allard, Rob Lloyd, and Connie Oswald

STANDARDS GLE's	Applied Learning Stand. SIP	OUTCOMES/BENCHMARKS Barrington Public Schools (NECAP GLE/GLE)	RESEARCH-BASED INSTRUCTIONAL STRATEGIES	RESOURCES	RESEARCH-BASED ASSESSMENT EVIDENCE
5.1 Problem Solving strategies		<p>5.1.1 Use problem-solving strategies appropriately and effectively for a given situation.</p> <ul style="list-style-type: none"> <li>identify the problem/question/task</li> <li>make a list</li> <li>create a diagram</li> </ul> <p>• determine, collect and organize the relevant information needed to solve real-world problems. (PRP)- grades 6 to 8-1</p> <ul style="list-style-type: none"> <li>organize data</li> <li>determine a pattern</li> <li>identify and use formulas when appropriate</li> <li>begin to create algebraic representation</li> </ul> <p>• use technology when appropriate to solve problems. (PRP) grades 6 to 8 -1</p> <p>5.1.2 Determine, collect and organize the relevant information needed to solve real-world problems.</p> <p>5.1.3 Apply integrated problem-solving strategies to solve problems in the physical, natural and social sciences, and in pure mathematics.</p> <p>5.1.4 Reflect on solutions and the problem-solving process for a given situation and refine strategies as needed. (PRP) grade 6 to 8-1</p> <ul style="list-style-type: none"> <li>contain accurate and appropriate data/responses</li> <li>apply conventions of mathematics, e.g.               <ul style="list-style-type: none"> <li>labeling, money two decimal places</li> <li>correct estimations</li> <li>accurate level of precision (rounding off)</li> </ul> </li> <li>proper execution of selected strategies</li> </ul>	<ul style="list-style-type: none"> <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 the scientific calculator</li> </ul> <ul style="list-style-type: none"> <li>Differentiated instruction by varying the content, process, and product and implementing           <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> </li> </ul>	<p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>Math Connections</li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Scientific calculator</li> <li>Overhead scientific calculator</li> <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.ride.ri.gov/instruction/curriculum">www.ride.ri.gov/instruction/curriculum</a></li> <li>NECAP Release tasks</li> <li>NECompact.org</li> <li>BMS website (Share Point)</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> <li>Scissors, glue</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>Donald in Mathmagic Land - video</li> <li>Classroom Instruction That Works, Marzano</li> <li>Math Who Needs It? (video)</li> </ul> <p><u>Community</u></p>	<p><b>COMMON ASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>MID-TERM EXAM</li> <li>FINAL EXAM</li> <li>QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

# Pre-Algebra, grade 7

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<p>5. PROBLEM SOLVING, REASONING, AND PROOF</p> <p>5.2 Mathematical reasoning and proof</p>		<p>Students will use mathematical reasoning and proof and be able to:</p> <p>5.2.1 Draw logical conclusions and make generalizations (inductively and/or deductively) from</p> <ul style="list-style-type: none"> <li>• patterns</li> <li>• graphs</li> <li>• tables</li> <li>• equations (B)</li> <li>• geometric representation (PRP) grades 6 to 8-2</li> </ul> <p>5.2.2 Formulate, test, and justify mathematical conjectures and arguments. (PRP) grades 6 to 8-2</p> <p>5.2.3 Construct an argument and determine the validity of a mathematical solution (PRP) grades 6 to 8-2</p> <p>5.2.4 Apply mathematical reasoning in other disciplines. (PRP) grades 6 to 8-2</p>	<p>Teacher may model and/or facilitate the following strategies (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 the scientific calculator</li> </ul> <ul style="list-style-type: none"> <li>• Differentiated instruction by varying the content, process, and product and implementing             <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> </ul> </li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li>• <i>Impact Mathematics, Course 2</i></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <i>Math Connections</i></li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Scientific calculator</li> <li>• Overhead scientific calculator</li> <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>• <a href="#">NECAP Release tasks</a></li> <li>• <a href="#">NECompact.org</a></li> <li>• <a href="#">BMS website (Share Point)</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), protractors</li> <li>• Scissors, glue</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>• Donald in Mathmagic Land - video</li> <li>• <i>Classroom Instruction That Works</i>, Marzano</li> <li>• <i>Math Who Needs It?</i> (video)</li> </ul> <p><u>Community</u></p>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-TERM EXAM</li> <li>• FINAL EXAM</li> <li>• QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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>Tests/quizzes</p> <p>Visual representation (e.g. Power Point™)</p>

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			<ul style="list-style-type: none"> <li>cubing, etc.</li> </ul>		
<p><b>6 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 Articulate ideas clearly and logically in both written and oral form.</p> <p>6.1.2 Present, share, explain, and justify thinking with others and build upon the ideas of others to solve problems.</p> <p>6.1.3 <b>Correctly</b> use mathematical terminology, labels, symbols, and notation. (CCR)-8-1</p> <p>6.1.4 Formulate questions, conjectures, definitions, and generalizations about data, information, and problem situations. (CCR)-8-1</p>	<p>Teacher may model and/or facilitate the following strategies (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 the scientific calculator</li> <li>Differentiated instruction by varying the content,</li> </ul>	<p>Resources, also see pages 1-2</p> <p><b>Textbook</b></p> <ul style="list-style-type: none"> <li><i>Impact Mathematics, Course 2</i></li> </ul> <p><b>Supplementary books</b></p> <ul style="list-style-type: none"> <li><i>Math Connections</i></li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>Scientific calculator</li> <li>Overhead scientific calculator</li> <li>Computer lab</li> <li><a href="http://www.glencoe.com">www.glencoe.com</a></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>BMS website (Share Point)</li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>Unifix cubes</li> <li>3D-solids</li> <li>Rulers (metric), protractors</li> <li>Scissors, glue</li> </ul> <p><b>School library resources</b></p> <ul style="list-style-type: none"> <li>Donald in Mathmagic Land - video</li> <li><i>Classroom Instruction That Works</i>, Marzano</li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>MID-TERM EXAM</li> <li>FINAL EXAM</li> <li>QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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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			process, and product and implementing <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> <li>▪</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Math Who Needs It?</a> (video)</li> </ul> <p><u>Community</u></p>	Tests/quizzes  Visual representation (e.g. Power Point™)
<p><b>6. COMMUNICATION, CONNECTIONS, AND REPRESENTATION</b></p> <p>6.2 Create and use representations</p>		<p>Students will create and use representations to communicate mathematical ideas and to solve problems and be able to:</p> <p>6.2.1 Use models and technology (as needed) to develop equivalent representations of the same mathematical concept.</p> <p>6.2.2 Create and use representations to solve problems and organize their thoughts and ideas.</p> <p>6.2.3 Convert between representations (e.g., a table of values, an equation, and a graph may all be representations of the same function). (CCR)-8-2</p>	<p>Teacher may model and/or facilitate the following strategies (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 the scientific calculator</li> </ul>	<p>Resources, also see pages 1-2</p> <p><u>Textbook</u></p> <ul style="list-style-type: none"> <li>• <a href="#">Impact Mathematics, Course 2</a></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li>• <a href="#">Math Connections</a></li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>• Scientific calculator</li> <li>• Overhead scientific calculator</li> <li>• Computer lab</li> <li>• <a href="http://www.glencoe.com">www.glencoe.com</a></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>• <a href="#">NECAP Release tasks</a></li> <li>• <a href="http://NECompact.org">NECompact.org</a></li> <li>• <a href="#">BMS website (Share Point)</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), protractors</li> <li>• Scissors, glue</li> </ul> <p><u>School library resources</u></p> <ul style="list-style-type: none"> <li>• <a href="#">Donald in</a></li> </ul>	<p>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>• MID-TERM EXAM</li> <li>• FINAL EXAM</li> <li>• QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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>

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<p><b>6. COMMUNICATION, CONNECTIONS, AND REPRESENTATION</b></p> <p>6.3 Mathematical connections</p>		<p>Students will recognize, explore, and develop mathematical connections and be able to:</p> <p>6.3.1 Connect new mathematical ideas to those already studied and build upon them.</p> <p>6.3.2 Understand that many real-world applications require an understanding of mathematical concepts (e.g., personal finance, running a business, building a house, following a recipe, or sending a rocket to the moon).</p> <p>6.3.3 Explain in oral and written form the relationships between a real-world problem and an appropriate mathematical model.</p> <p>6.3.4 Explain in oral and written form the relationships among various mathematical concepts (e.g., the relationship between exponentiation and multiplication). (CCR)-8-3</p>	<p>Teacher may model and/or facilitate the following strategies (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><a href="#">Impact Mathematics, Course 2</a></li> </ul> <p><u>Supplementary books</u></p> <ul style="list-style-type: none"> <li><a href="#">Math Connections</a></li> </ul> <p><u>Technology</u></p> <ul style="list-style-type: none"> <li>Scientific calculator</li> <li>Overhead scientific calculator</li> <li>Computer lab</li> <li><a href="http://www.glencoe.com">www.glencoe.com</a></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>BMS website (Share Point)</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>Assessments/evidence, also see pages 1-2</p> <p><b>REQUIRED ASSESMENTS</b></p> <p><b>REQUIRED PROBLEMS</b></p> <p><b>COMMON ASSESMENTS</b></p> <ul style="list-style-type: none"> <li>MID-TERM EXAM</li> <li>FINAL EXAM</li> <li>QUARTERLY (MS only)</li> </ul> <p><b>CHAPTER TESTS BASED ON IMPACT MATHEMATICS COURSE 2</b></p> <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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