

School: Issaquah Valley Elementary

Grade/Department: Elementary

Content Area: Math

CIP Goal: In 2010, 75% of fifth grade students will meet standard on the math section of the WASL

<p>What are the Research-Identified Strategies?</p>	<p>What are the Desired Student Products and Behaviors?</p>	<p>How Will You Accomplish This?</p> <ul style="list-style-type: none"> • Steps to implementing this strategy • Prof. development • Visits • Additional research 	<p>How Often?</p> <ul style="list-style-type: none"> • Frequency • Timeline 	<p>What Evidence Will You Be Gathering Relative to the Desired Student Products and Behaviors?</p> <ul style="list-style-type: none"> • Formative • Summative
<p>1. Using a strong research-based curriculum is critical.</p> <p><i>A viable and guaranteed curriculum has the greatest impact on student achievement.</i></p> <p>~Marzano: <i>What Works in Schools</i></p> <p><i>A curriculum is more than a collection of activities; it must be coherent, focused on important mathematics, and well-articulated across the grades.</i></p> <p>~NCTM</p>	<p>Students will be actively engaged in the learning processes of math using <i>Everyday Math</i>.</p> <ul style="list-style-type: none"> • Student discourse • Homework completion • Students analysis of errors • Self-monitoring progress • Self-reflection <p>Students will be immersed in mathematical learning through every aspect and component of the <i>Everyday Math</i> curriculum.</p>	<p>All teachers will use all components of <i>Everyday Math</i> as their primary resource for math instruction.</p> <p>Teachers will meet in grade level and building teams to develop a shared vision and understanding of math instruction using <i>Everyday Math</i>. They will also review the curriculum, discuss pacing and challenges and will plan for upcoming units.</p>	<p>As of August 2007, teachers attended district training for <i>Everyday Math</i>. Content included: various curriculum components, recommended instructional strategies, organization and pacing.</p> <p>Monthly</p>	<p>Baseline data will be collected regarding students' knowledge using the assessments provided by the <i>Everyday Math</i> committee.</p> <p>Building-wide, class-wide and individual student performance will be measured three times a year using common grade level assessments administered before the three report cards in November, March and June.</p> <p>Teachers will collaboratively analyze selected student work samples each trimester to determine individual students' math abilities, classroom needs, and building needs.</p>

<p>2. Students need multiple and varied learning opportunities.</p> <p><i>Opportunities to learn have the strongest relationship to student achievement.</i></p> <p>~Marzano: <i>What Works In Schools</i> ~Grouws & Cabella: <i>Improving Student Achievement in Mathematics</i></p>	<p>Students will learn math for at least 70-90 minutes daily. Half day kindergarten will follow EDM standards.</p>	<p>Teachers will provide math instruction daily for 70-90 minutes (not necessarily a “block”).</p> <p>Connections to other content areas will deepen and extend mathematical understanding. For example:</p> <ul style="list-style-type: none"> • Math in PE –math relevant to fitness goals • Math in music – fractions relevant to calculating beats per measure of music • Math in library – Reading books that are linked with <i>Everyday Math</i>. <p>Specialists will be given a month-by-month calendar with grade level <i>Everday Math</i> unit overviews for easier integration of math.</p>	<p>September 2007- 2010</p>	
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<p>3. Quality classroom instruction has a significant impact on student learning and understanding.</p> <p>The strongest possibility of improving student learning emerges where schools implement multiple changes based on research-supported practice implemented by skilled teachers ~Grouws & Cebulla</p> <p>The individual classroom teacher could have the greatest impact on student achievement than any other school-level factor. The teacher factors are in the areas of instructional strategies and classroom management. ~Marzano: <i>What Works in Schools</i> ~Linda Darling Hammond: <i>Right to Learn</i></p>	<p>Students will demonstrate increased use of mathematical vocabulary, understanding of math strands, problem solving strategies (both invented and conventional) and ability to communicate mathematically.</p> <p>Students will build on their foundation of existing knowledge of mathematics and apply this knowledge to gain understanding of new tasks and concepts.</p> <p>Students will solve math problems that are drawn from authentic scenarios and situations. These will be provided by <i>Everyday Math</i>.</p>	<p>Teachers will expand instructional strategies to promote active engagement, increase learning, discourse and inquiry among students.</p> <p>Differentiated strategies will be developed to support the needs of all learners</p> <ul style="list-style-type: none"> • Provide staff support to differentiate math instruction using the <i>Everyday Math</i> materials. <p>The EDM trainers will meet with staff. Staff will be provided with training and modeling of effective math instructional strategies.</p>	<p>September 2007- 2010</p> <p>September 2007- 2010</p> <p>August, October, January and May</p>	<p>Teachers will informally observe student math behavior and dialogue. They will note the following :</p> <ul style="list-style-type: none"> • Use of math vocabulary • Explanation of problem solving strategies used • Articulation of math strands • Math “look fors” <ul style="list-style-type: none"> ○ Boys and girls contributing equally? ○ Students talking as often as the teacher? ○ Are lessons related to GLEs? ○ Are multiple strategies and approaches modeled and encouraged? ○ Are real world connections made? ○ Are students playing math games on a daily basis or as outlined in lessons? ○ Are students using mental math? ○ Which grouping of students is most effective?
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<p>4. Fluency in mathematical literacy- being able to read mathematically, writing mathematically and communicate mathematically- is a fundamental component of mathematics.</p> <p>Mathematical text may require a more specialized type of reader in order to gain necessary information. ~Barton et. al.</p> <p>Writing is a powerful means to help students communicate their thinking and solidify their conceptual understanding. ~Pugalee et.al.</p> <p>If students are to share their mathematical arguments & support them with evidence, then communication/language needs to be taught – ~Lambert, et.al.</p>	<p>Students will communicate their mathematical understanding in multiple ways</p> <ul style="list-style-type: none"> • Pictures • Words • Charts • Tables • Sentences • Equations and Numbers <p>Students will use and articulate problem solving and thinking strategies</p> <p>Students will understand and employ different reading strategies to understand mathematics text.</p>	<p>Teachers will facilitate math communication as outlined in <i>Everyday Math</i>.</p> <p>Teachers will post mathematical vocabulary found in <i>Everyday Math</i> and on the WASL in their classroom for immediate student access.</p> <p>Teachers will provide reading strategies for reading mathematical texts- i.e. use of key words in problem that indicate the operation required.</p>	<p>September 2007- 2010</p>	<p>Teachers will gather data on students mathematical communication skills by using:</p> <ul style="list-style-type: none"> • Informal <i>Everyday Math</i> assessments • Unit Progress Checks. • Informal conversations with students • Homework and daily assignments <p>Teachers will measure student performance on common grade level formative assessments administered Fall, Winter, and Spring during a pre-determined window of time.</p>
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