


Goal		
<p>At Our Lady of Fatima Catholic Elementary School, all students will demonstrate sound <i>reasoning and proving skills</i>, particularly when posing questions, problem solving, and explaining their thinking in mathematics.</p>		
Achieving	Believing	Belonging
<p>All students and staff have a common understanding of what reasoning and proving looks and sounds like. This common understanding is visible in all classrooms and demonstrated in a variety of developmentally ways in different subject areas.</p>	<p>Students apply their reasoning and proving skills to demonstrating their Catholic faith and values in the 21<sup>st</sup> century.</p>	<p>Students report feeling that their classrooms are safe places for them to make mistakes and take risks.</p>
<p><b>What is reasoning &amp; proving?</b></p> <ul style="list-style-type: none"> <li><i>Observing mathematical strategies and talking about them help make us aware of our mathematical thinking. When we explain our thinking and reasoning, we all learn more. Ontario Kindergarten Program p. 243</i></li> </ul> <p><b>Why is it important?</b></p> <ul style="list-style-type: none"> <li><i>The reasoning process supports a deeper understanding of mathematics by <b>enabling students to make sense of the mathematics they are learning.</b></i></li> <li><i>Teachers draw on <b>students' natural ability to reason to help them learn to reason mathematically.</b></i></li> <li><i>Students should be <b>encouraged to reason from the evidence they find in their explorations and investigations or from what they already know to be true, and to recognize the characteristics of an acceptable argument in the mathematics classroom.</b></i></li> <li><i>Teachers <b>help students revisit conjectures that they have found to be true in one context to see if they are always true.</b></i></li> </ul> <p><i>Ontario Mathematics Curriculum Gr 1-8 p. 14</i></p> <p style="text-align: center;"><b><i>“How do you know? Prove it.”</i></b></p>		<ul style="list-style-type: none"> <li>How could students use their reasoning and proving skills to answer this question?</li> <li>What other questions could they ask about this picture that would help them to demonstrate their reasoning and proving skills?</li> </ul> <div style="text-align: center;">  </div>