




## Mathematical Thinking and Reasoning Standards

### Classroom Look-Fors

MTR: *Because Math Matters*

Teacher Name: \_\_\_\_\_ Course: \_\_\_\_\_ Date: \_\_\_\_\_

This document is intended to provide school leaders and teachers with look-fors in the form of guiding questions to support mathematics learning and instruction focused around the Mathematical Thinking and Reasoning Standards (MTRs). The state of Florida has defined the MTRs as instructional practices, or strategies, which should be seen in the classroom on a daily basis. The B.E.S.T. Standards for Mathematics should be taught through the lens of the Mathematical Thinking and Reasoning Standards. It is important to note that not all MTRs will be evident in every lesson.

Students will demonstrate the ability to:	Are students...	Evident	
			Notes
MA.K12.MTR.1.1: <i>Actively participate in effortful learning both individually and collectively.</i>	in an environment where mistakes are viewed as an opportunity to learn?		
	encouraged to implement strategies?		
	assigned challenging tasks?		
	provided opportunities for collaboration?		
	provided effective feedback?		
MA.K12.MTR.2.1: <i>Demonstrate understanding by representing problems in multiple ways.</i>	making connections between concepts and representations?		
	using models and/or manipulatives?		
	guided from concrete to pictorial to abstract representations?		
	shown that various representations are appropriate in different contexts?		
MA.K12.MTR.3.1: <i>Complete tasks with mathematical fluency.</i>	demonstrating flexibility of solution methods?		
	provided opportunities to practice efficiency and accuracy?		
	asked to determine the most efficient method for a given situation?		



Students will demonstrate the ability to:	Are students...	Evident	Notes
			
MA.K12.MTR.4.1: <i>Engage in discussions that reflect on the mathematical thinking of self and others.</i>	given opportunities to discuss their thinking with the teacher and their peers?		
	viewing error analysis as an opportunity for learning?		
	developing their ability to justify their thinking and compare their responses with others?		
MA.K12.MTR.5.1: <i>Use patterns and structure to help understand and connect mathematical concepts.</i>	receiving help to recognize patterns and connect those patterns to mathematical concepts?		
	given opportunities to develop generalizations based on similarities found among problems?		
	provided opportunities to create plans and procedures to solve problems?		
MA.K12.MTR.6.1: <i>Assess the reasonableness of solutions.</i>	expected to estimate or predict solutions prior to solving?		
	asked to make sense of their solutions and their methods to achieve their solutions?		
	required to check their work within and after a task and verify the reasonableness of their solution?		
	asked to justify their solution?		
MA.K12.MTR.7.1: <i>Apply mathematics to real-world contexts.</i>	expected to create concrete and abstract models?		
	challenged to verify the accuracy of their models and methods?		
	asked to apply various concepts to other disciplines?		