

Standards of Mathematical Practice Math K-2

1. Make sense of problems and persevere in solving them.		
<p>Kindergarten: Students begin to explain to themselves and others the meaning of a problem, ways to solve it, and determine whether their thinking made sense.</p>	<p>1st Grade: Students explain problems and seek ways to solve them. Students attempt several approaches to solving problems.</p>	<p>2nd Grade: Students check themselves by questioning whether a problem solving approach makes sense.</p>
2. Reason abstractly and quantitatively.		
<p>Kindergarten: Students use numbers to represent a quantity. Students use pictures, manipulatives, diagrams, and charts to solve joining and separating situations. Based on these scenarios, students understand the symbols + and -.</p>	<p>1st Grade: Students connect quantities to symbols.</p>	<p>2nd Grade: Students know and use different properties of operations and objects.</p>
3. Construct viable arguments and critique the reasoning of others.		
<p>Kindergarten: Using verbal and written representations, students express, explain, and organize their thinking. Students begin to develop the ability to reason and analyze situations as they consider such questions as, "Are you sure?", "Do you think that would happen all the time?", and "I wonder why?".</p>	<p>1st Grade: Students construct arguments using objects, pictures, drawing, and actions. In addition to communicating their own thinking, they question others and determine if the explanations make sense.</p>	<p>2nd Grade: Students explain their own thinking, listen to others, and decide whether explanations make sense by asking appropriate questions.</p>
4. Model with mathematics.		
<p>Kindergarten: Students experiment with real life problems using numbers, mathematical language (words), drawings, objects, acting out, charts, lists, and number sentences.</p>	<p>1st Grade: Students use multiple ways to represent problems including numbers, mathematical vocabulary, pictures, objects, acting out, making a chart of list, create equations, etc.</p>	<p>2nd Grade: Students use all representation as needed.</p>
5. Use appropriate tools strategically.		
<p>Kindergarten: Students determine and use materials (3 dimensional solids, connecting cubes, ten frames, number balances) and technology (virtual manipulatives, calculators, websites) to explore mathematical concepts.</p>	<p>1st Grade: Students use tools, including estimation, to solve mathematical problems.</p>	<p>2nd Grade: Students use available tools to solve mathematical problems.</p>
6. Attend to precision.		
<p>Kindergarten: Students use precise mathematical vocabulary to communicate (describe their actions and strategies clearly), calculate, and measure.</p>	<p>1st Grade: Students use clear and precise mathematical language to explain their reasoning.</p>	<p>2nd Grade: Students use clear and precise language to explain their reasoning.</p>

7. Look for and make use of structure.		
Kindergarten: Students look for patterns and structures within the number system.	1 st Grade: Students identify patterns and structures and use this information to solve problems. Examples include using commutative properties, adding to ten, etc.	Grade 2: Students use mental math strategies based on patterns (making ten, fact families, doubles).
8. Look for and express regularity in repeated reasoning.		
Kindergarten: Students notice repetitive actions in geometry, counting, comparing, etc.	1 st Grade: Students use repetitive actions in counting and computing. Examples include adding multiples of tens to better understand place value.	Grade 2: Students notice repetitive actions in computations. For example, students use shortcuts, rounding up and then adjusting the answer,