

Minnesota 5th Grade MCAII Mathematics Teacher Reflection Form

Have your students mastered these benchmarks?

Number and Operations

Vocabulary *remainder, place value*

Exceeds Standard Efficiently divides and knows when to divide in a problem solving situation; adds and subtracts fluently with fractions and decimals.

Meets Standard Divides multi-digit numbers; solves division problems when all relevant information is present and the question is clearly defined; orders and compares common fractions and decimals; adds and subtracts fractions; adds and subtracts decimals.

Partially Meets Knows basic division facts; knows benchmark decimal and fraction equivalents (e.g., $\frac{1}{2} = 0.5$, $\frac{1}{4} = 0.25$).

Does Not Meet Partial mastery of basic division facts; recognizes fractions and decimals in familiar context.

Self-Reflection #1	Unit	#	Benchmark	Self-Reflection #2
		5.1.1.1	Divide multi-digit numbers, using efficient and generalizing procedures, based on knowledge of place value, including standard algorithms. Recognize that quotients can be represented in a variety of ways, including a whole number with a remainder , a fraction or mixed number , or a decimal .	
		5.1.1.2	Consider the context in which a problem is situated to select the most useful form of the quotient for the solution and use the context to interpret the quotient appropriately.	
		5.1.1.3	Estimate solutions to arithmetic problems in order to assess the reasonableness of results.	
		5.1.1.4	Solve real-world and mathematical problems requiring addition, subtraction, multiplication and division of multi-digit whole numbers. Use various strategies , including the inverse relationships between operations.	
		5.1.2.1	Read and write decimals using place value to describe decimals in terms of groups from millionths to millions .	
		5.1.2.2	Find 0.1 more than a number and 0.1 less than a number. Find 0.01 more than a number and 0.01 less than a number. Find 0.001 more than a number and 0.001 less than a number.	
		5.1.2.3	Order fractions and decimals , including mixed numbers and improper fractions, and locate on a number line.	
		5.1.2.4	Recognize and generate equivalent decimals, fractions, mixed numbers and improper fractions in various contexts.	
		5.1.2.5	Round numbers to the nearest 0.1, 0.01 and 0.001.	
		5.1.3.1	Add and subtract decimals and fractions , using efficient and generalizable procedures, including standard algorithms.	
		5.1.3.2	Model addition and subtraction of fractions and decimals using a variety of representations.	
		5.1.3.3	Estimate sums and differences of decimals and fractions to assess the reasonableness of results.	
		5.1.3.4	Solve real-world and mathematical problems requiring addition and subtraction of decimals, fractions and mixed numbers, including those involving measurement, geometry and data.	

Algebra

Vocabulary ordered pair, graph, *expression, inequality*

Exceeds Standard Works fluently with patterns and/or rules involving more than one operation or complex problem; applies the commutative, associative and distributive properties; interprets inequalities using variables.

Meets Standard Uses rules to generate patterns; translates between patterns and rules; applies commutative and associative properties; understands simple inequalities; represents a situation with an equation containing a variable.

Partially Meets Recognizes patterns in a list of numbers; resorts to calculation to verify commutative and associative properties; solves verbal and simple one-step equations and inequalities by substituting a value for the unknown.

Does Not Meet Recognizes patterns that use skip counting; works with simple variable representations.

Self-Reflection #1	Unit	#	Benchmark	Self-Reflection #2
		5.2.1.1	Create and use rules, tables, spreadsheets and graphs to describe patterns of change and solve problems.	
		5.2.1.2	Use a rule or table to represent ordered pairs of positive integers and graph these ordered pairs on a coordinate system.	
		5.2.2.1	Apply the commutative, associative and distributive properties and order of operations to generate equivalent numerical expressions and to solve problems involving whole numbers.	
		5.2.3.1	Determine whether an equation or inequality involving a variable is true or false for a given value of the variable.	

	5.2.3.2	Represent real-world situations using equations and inequalities involving variables. Create real-world situations corresponding to equations and inequalities.	
	5.2.3.3	Evaluate expressions and solve equations involving variables when values for the variables are given.	

Geometry and Measurement

Vocabulary	cube, prism, pyramid, cone, <i>cylinder</i> , <i>edge</i> , <i>face</i> , <i>base</i> , <i>three-dimensional</i> , <i>triangular</i> , <i>rectangular</i> , <i>net</i> , cube, prism, pyramid, formula, surface area, volume , base, height			
Exceeds Standard	Understands the connections between two- and three-dimensional representations; conceptual understanding of area, surface area, and volume.			
Meets Standard	Classifies three-dimensional figures and describes distinct attributes using correct vocabulary; uses formulas to calculate area, surface area, and volume; decomposes familiar shapes.			
Partially Meets	Recognizes similar attributes of three-dimensional figures; limited vocabulary for attributes of three-dimensional figures; recognizes area as a multiplicative model (e.g., multiplies two sides of any shape to find area).			
Does Not Meet	Distinguishes between two- and three-dimensional shapes; uses informal naming conventions.			
Self-Reflection #1	Unit	#	Benchmark	Self-Reflection #2
		5.3.1.1	Describe and classify three-dimensional figures including cubes, prisms and pyramids by the number of edges, faces or vertices as well as the types of faces.	
		5.3.1.2	Recognize and draw a net for a three-dimensional figure.	
		5.3.2.1	Develop and use formulas to determine the area of triangles, parallelograms and figures that can be decomposed into triangles.	
		5.3.2.2	Use various tools and strategies to measure the volume and surface area of objects that are shaped like rectangular prisms .	
		5.3.2.3	Understand that the volume of a three-dimensional figure can be found by counting the total number of same-sized cubic units that fill a shape without gaps or overlaps. Use cubic units to label volume measurements.	
		5.3.2.4	Develop and use the formulas $V = \ell wh$ and $V = Bh$ to determine the volume of rectangular prisms. Justify why base area B and height h are multiplied to find the volume of a rectangular prism by breaking the prism into layers of unit cubes.	

Data Analysis and Probability

Vocabulary	mean, median, range, minimum, maximum, double-bar graph, line graph			
Exceeds Standard	Conceptual understanding of mean, median and range; analyzes complex situations that include data displays and making interpretations.			
Meets Standard	Calculates mean, median and range, and data can be provided in a variety of formats (e.g., tables, bar graphs); works fluently with data displays and solving problems.			
Partially Meets	Applies rote procedures for calculating mean, median and range (e.g., median is always middle number in a list); interprets simple displays of data to solve problems.			
Does Not Meet	Performs procedures for finding mean, median and range according to direct instructions; reads displays of data.			
Self-Reflection #1	Unit	#	Benchmark	Self-Reflection #2
		5.4.1.1	Know and use the definitions of the mean, median and range of a set of data. Know how to use a spreadsheet to find the mean, median and range of a data set. Understand that the mean is a " leveling out " of data.	
		5.4.1.2	Create and analyze double-bar graphs and line graphs by applying understanding of whole numbers, fractions and decimals. Know how to create spreadsheet tables and graphs to display data.	

Benchmarks that will be taught by the mid-January OLPA

- Unit 1 –
- Unit 2 –
- Unit 3 –
- Unit 4 – (taught in January)

HOW TO USE THE MCA TEACHER RELECTION FORMS

Minnesota MCAIII Mathematics Teacher Reflection Form

Have your students mastered these benchmarks? What is your evidence?

Directions: Take 20 minutes 2-5 times a year to reflect on your student's mastery of grade level standards. All staff are highly encouraged to reflect one week prior to and within one week after all MCA testing dates (including OLPA). The questions on this sheet written in **red** are questions you can ask yourself as you use the reflection form.

Achievement Level Descriptors HOW are you teaching the standards?	Strand (Number and Operations, Algebra, Geometry and Measurement, Data Analysis or Probability)			
	Vocabulary	<p>This section represents the vocabulary highlighted in the Test Specifications. All of these terms may show up on student assessments. In addition, terms from prior grades will be on the assessment. What specific best practices for teaching vocabulary have you used to teach all these terms? What evidence do you have that students have mastered these terms? Are all students using these terms orally and in writing? Tip: ELL and Sp Ed staffs have great ideas for teaching academic vocabulary to students. Words highlighted are terms that appear in the test specifications more than once. If a term appears in slightly larger font, this term appears multiple times.</p>		
	Exceeds Standard	<p>This is the gold standard level for all students. All students should receive instruction that allows them to master this level. This level often expects students to have conceptual understanding of the standards in this section. It requires students to make connections. If students only receive teaching at the lower levels, most will not meet or exceed the state standards. What specific classroom experiences have given your students a chance to master conceptual understanding of grade level standards?</p>		
	Meets Standard	<p>Students who "Meet" grade level standards have are considered 'proficient' by the state.</p>		
	Partially Meets	<p>Students who score as "Partially Meets" on the MCA's have likely mastered the skills in the 'does not meet' section below as well as the skills listed in this section. Ask yourself: "What is the difference between the words in the 'partially meets' and 'does not meet' sections? What did this look like in my classroom?"</p>		
Does Not Meet	<p>Students who score as "Does Not Meet" on the MCA's can only do items described in this section. This level often represents teaching skills vs. teaching concepts. What percent of my teaching is represented by the description in this level? It is recommended that teachers spend at most 25% of their time teaching at this level.</p>			
Self-Reflection #1	Unit	#	Benchmark	Self-Reflection #2
<p>It is important for all teachers to personally reflect on each benchmark. How one reflects can take many forms. Here are 2 options, but feel free to reflect in your own way.</p> <p>Option 1: How well do you predict your students will do on each benchmark? Rank each benchmark as High OR Medium OR Low</p> <p>Option 2 - Use this rubric 1: I have not taught this benchmark 2: I have taught this benchmark 3: I have assessed this benchmark 4: I have evidence that 85% or more of students have mastered the entire benchmark. 5: 85% or more of students have mastered the benchmark and consistently use appropriate notation and mathematical vocabulary both written and orally.</p>	<p>COMING SUMMER 2013</p> <p>The numbers in this section represent the units listed on the MPS Focused Instruction curriculum guide Year-at-a-glance (YAG)</p>	<p>The number in this section represents the numbers the state uses to identify each benchmark in the standards.</p> <p>1st #: Grade Level 2nd #: Strand 3rd #: Standard 4th #: Benchmark</p>	<p>This section is the exact benchmark language from the Minnesota 2007 MCAIII state standards. These are the benchmarks all students in grades 3-8th and 11th grade will be assessed on each May. Sites that choose to participate in the OLPA (Optional Local Purpose Assessment) will be assessed on these benchmarks as well.</p>	<p>This column can also be completed using one of the reflection options from the first column.</p> <p>Note: This same form can be used by students, particularly at the secondary level, to personally reflect on their progress towards meeting grade level standards.</p>

Benchmarks that will be taught by the mid-January OLPA:

COMING SUMMER 2013

This is a list of benchmarks from the Focused Instruction Curriculum Guides that students should have mastered by the end of Semester 1.