Benchmark Domain and Essential Math coverage

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mCLASS® Math consists of three Benchmark assessments for each grade level. These Benchmark assessments are designed to be implemented at the beginning of year (BOY), middle of year (MOY), and end of year (EOY).

BOY	MOY	EOY
Pinpoint "ready to learn" indicators.	Track growth against precursor skills and grade-level targets.	Evaluate growth for the year.

Items included on each Benchmark are carefully selected to ensure a thorough evaluation of students' knowledge and to establish performance cut scores to effectively track their mathematics achievement. Major math concepts—or Domains—for each Benchmark are identified by their appropriateness for time of year and include foundational content and skills—or Essential Math—for the grade level. The following pages outline the Domains and Essential Math included at each grade level.

Domains are the critical math concepts for each grade, aligned to state standards and requirements. Every grade-level Domain is included on every Benchmark. The number of items per Domain varies, reflecting the emphasis placed on certain concepts and skills at different times of year.

Essential Math are skills within a Domain identified as foundational for each grade level. Essential Math outlines the progression of learning throughout the year.

Domain

	GK	G1	G2	G3	G4	G5
Counting & Cardinality	✓	✓				
Operations & Algebraic Thinking	✓	✓	✓	✓	✓	✓
Number & Operations in Base Ten	✓	✓	✓	✓	✓	✓
Number & Operations-Fractions				✓	✓	✓
Measurement & Data	✓	✓	✓	✓	✓	✓
Geometry	✓	✓	✓	✓	✓	✓

Essential Math

	GK	G1	G2	G3	G4	G5
Number Sense	✓	✓	✓	✓	✓	✓
Composition of Number	✓					
Early Algebraic Thinking	✓	✓	✓	✓	✓	✓
Whole Number Operations	✓	✓	✓	✓	✓	✓
Place Value	✓	✓	✓	✓	✓	✓
Fraction Equivalence				✓	✓	✓
Fraction Operations					✓	✓
Numerical Expressions						✓

Essential Math (continued)

	GK	G1	G2	G3	G4	G5
Measurable Attributes	✓	✓				
Data Classification	✓					
Area Measurement				✓	✓	
Length Measurement		✓	✓	✓	✓	
Contextual Measurement Problems					✓	✓
Representing & Interpreting Data	✓	✓	✓		✓	✓
Volume Measurement						✓
Properties & Attributes of Shapes	✓	✓	✓	✓	✓	✓
Shape Composition	✓	✓	✓	✓		
Spatial Reasoning	✓					
Time & Money		✓	✓	✓	✓	
Numerical Comparison				✓	✓	✓
Angle Measurement					✓	
Measurement Conversion					✓	✓
Decimal Operations						✓
Coordinate Plane						✓
Weight & Liquid Volume Measurement				✓		

Grade K

Domain	Essential Math	Concept/Skill
Counting & Cardinality	Number Sense	Enumeration
		Number sequence
		Magnitude comparison
Operations & Algebraic Thinking	Composition of Number	Making 10
		Number Decomposition
	Early Algebraic Thinking	Equivalence
	Whole Number Operations	Whole Number Addition
		Whole Number Subtraction
Number & Operations Base Ten	Place Value	Composing & Decomposing Numbers
Measurement & Data	Measurable Attributes	Measurable Attributes
	Data Classification	Data Classification
Geometry	Properties & Attributes of Shapes	Properties & Attributes of 2D Shapes
		Properties & Attributes of 3D Shapes
	Shape Composition	2D & 3D Composite Figures
	Spatial Reasoning	Orientation & Position

Grade 1

Domain	Essential Math	Concept/Skill
Counting & Cardinality	Number Sense	Enumeration
Operations & Algebraic Thinking	Early Algebraic Thinking	Equivalence
	Whole Number Operations	Whole Number Addition
		Whole Number Subtraction
Number & Operations in Base Ten	Place Value	Composing & Decomposing Numbers
		Numerical Comparison
	Whole Number Operations	Whole Number Addition
		Whole Number Subtraction
Measurement & Data	Length Measurement	Estimating & Measuring Length
	Representing & Interpreting Data	Interpreting Categorical Data
	Measurable Attributes	Measurable Attributes
	Time & Money	Time
Geometry	Properties & Attributes of Shapes	Properties & Attributes of 2D Shapes
	Shape Composition	2D & 3D Composite Figures
		Equal Partitioning

Grade 2

Domain	Essential Math	Concept/Skill
Operations & Algebraic Thinking	Early Algebraic Thinking	Equivalence
		Equal Groups
	Whole Number Operations	Whole Number Addition
		Whole Number Subtraction
		Multi-Step Problems
Number & Operations in Base Ten	Place Value	Base Ten Place Value
		Composing & Decomposing Numbers
		Numerical Comparison
	Number Sense	Number Sequence
	Whole Number Operations	Whole Number Addition
		Whole Number Subtraction

Domain	Essential Math	Concept/Skill
Measurement & Data	Length Measurement	Estimating & Measuring Length
	Representing & Interpreting Data	Representing Categorical Data
		Interpreting Categorical Data
	Whole Number Operations	Whole Number Subtraction
	Time & Money	Time
		Money
Geometry	Properties & Attributes of Shapes	Properties & Attributes of 2D Shapes
	Shape Composition	Equal Partitioning

Grade 3

Domain	Essential Math	Concept/Skill
Operations & Algebraic Thinking	Early Algebraic Thinking	Equivalence
		Equal Groups
	Whole Number Operations	Whole Number Addition
		Whole Number Subtraction
		Whole Number Multiplication
		Whole Number Division
Number & Operations in Base Ten	Place Value	Base Ten Place Value
		Composing & Decomposing Numbers
		Numerical Comparison
		Rounding
	Number Sense	Number Sequence
	Whole Number Operations	Whole Number Addition
		Whole Number Subtraction
		Whole Number Multiplication

Domain	Essential Math	Concept/Skill
Number & Operations – Fractions	Fraction Equivalence	Fractions Equivalent to Fractions
	Number Sense	Fraction Representations
		Fraction Sense
	Numerical Comparison	Fraction Comparison
Measurement & Data	Area Measurement	Estimating & Measuring Area
		Area Calculations
	Length Measurement	Estimating & Measuring Length
		Length Calculations
	Weight & Liquid Volume Measurement	Estimating & Measuring Liquid Volume
		Estimating & Measuring Weight
	Representing & Interpreting Data	Representing Categorical Data
		Interpreting Categorical Data
	Time & Money	Time
Geometry	Properties & Attributes of Shapes	Properties & Attributes of 2D Shapes
	Shape Composition	Equal Partitioning

Grade 4

Domain	Essential Math	Concept/Skill
Operations & Algebraic Thinking	Early Algebraic Thinking	Equivalence
	Whole Number Operations	Whole Number Multiplication
		Whole Number Division
		Multi-Step Problems
Number & Operations in Base Ten	Place Value	Base Ten Place Value
		Numerical Comparison
		Rounding
	Number Sense	Number Sequence
	Whole Number Operations	Whole Number Addition
		Whole Number Subtraction
		Whole Number Multiplication
		Whole Number Division

Domain	Essential Math	Concept/Skill
Number & Operations – Fractions	Fraction Equivalence	Fractions Equivalent to Fractions
	Fraction Operations	Fraction Addition
		Fraction Subtraction
		Fraction Multiplication
	Number Sense	Fraction Representations
	Numerical Comparison	Fraction Comparison
Measurement & Data	Angle Measurement	Angle Calculations
	Area Measurement	Area Calculations
	Contextual Measurement Problems	Contextual Measurement Problems
	Length Measurement	Estimating & Measuring Length
	Measurement Conversion	U.S. Customary Conversions
	Representing & Interpreting Data	Interpreting Quantitative Data
	Time & Money	Money
Geometry	Properties & Attributes of Shapes	Properties & Attributes of 1D Objects
		Properties & Attributes of 2D Shapes

Grade 5

Domain	Essential Math	Concept/Skill
Operations & Algebraic Thinking	Early Algebraic Thinking	Patterns
	Numerical Expressions	Evaluating Numerical Expressions
		Writing & Interpreting Numerical Expressions
	Whole Number Operations	Whole Number Division
Number & Operations in Base Ten	Place Value	Base Ten Place Value
		Numerical Comparison
		Rounding
	Whole Number Operations	Whole Number Addition
		Whole Number Subtraction
		Whole Number Multiplication
		Whole Number Division
	Decimal Operations	Decimal Addition
		Decimal Subtraction

Domain	Essential Math	Concept/Skill
Number & Operations – Fractions	Fraction Equivalence	Fractions Equivalent to Fractions
	Fraction Operations	Fraction Addition
		Fraction Subtraction
		Fraction Multiplication
	Number Sense	Fraction Representations
		Fraction Sense
	Numerical Comparison	Fraction Comparison
Measurement & Data	Contextual Measurement Problems	Contextual Measurement Problems
	Measurement Conversion	Metric Conversions
		U.S. Customary Conversions
	Representing & Interpreting Data	Interpreting Quantitative Data
	Volume Measurement	Volume Calculations
Geometry	Coordinate Plane	Coordinates & Points
	Properties & Attributes of Shapes	Properties & Attributes of 1D Objects
		Properties & Attributes of 2D Shapes

Notes

Notes

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