

## K-5 MATH Standards/Benchmarks/Grade Level Expectations (GLE)

Updated 1/16/08

<b>Standard 1: Understands and applies problem solving strategies.</b>					
<b>Interval Benchmark 1: Uses a variety of strategies to solve problems</b>			<b>Interval Benchmark 1: Uses a variety of strategies to solve problems</b>		
<b>Grade Level Expectations K</b>	<b>Grade Level Expectations 1</b>	<b>Grade Level Expectations 2</b>	<b>Grade Level Expectations 3</b>	<b>Grade Level Expectations 4</b>	<b>Grade Level Expectations 5</b>
a. Applies problem solving strategies	a. Applies problem solving strategies	a. Applies problem solving strategies	a. Applies problem solving strategies	a. Applies problem solving strategies	a. Applies problem solving strategies
<b>Interval Benchmark 2: Justifies the process used to solve a numerical problem</b>			<b>Interval Benchmark 2: Justifies the process used to solve a numerical problem</b>		
<b>Grade Level Expectations K</b>	<b>Grade Level Expectations 1</b>	<b>Grade Level Expectations 2</b>	<b>Grade Level Expectations 3</b>	<b>Grade Level Expectations 4</b>	<b>Grade Level Expectations 5</b>
a. Uses concrete objects and pictures to explain reasoning	a. Justifies reasoning strategies	a. Justifies reasoning strategies	a. Determines reasonableness of a solution	a. Justifies the results of a solution	a. Justifies a solution
<b>Standard 2: Understands and applies concepts of numbers and operations.</b>					
<b>Interval Benchmark 1: Describes the properties of numbers and number systems</b>			<b>Interval Benchmark 1: Describes the properties of numbers and number systems</b>		
<b>Grade Level Expectations K</b>	<b>Grade Level Expectations 1</b>	<b>Grade Level Expectations 2</b>	<b>Grade Level Expectations 3</b>	<b>Grade Level Expectations 4</b>	<b>Grade Level Expectations 5</b>
a. Applies counting rules using cardinal and ordinal numbers	a. Applies counting rules using cardinal and ordinal numbers	a. Applies counting rules using cardinal and ordinal numbers; counts in multiples of 100's, 10's, and 1's	a. Applies counting rules using cardinal and ordinal numbers	a. Applies counting rules to decimals	a. Applies counting rules to decimals and fractions
b. Uses number theory	b. Uses number theory	b. Uses number theory	b. Uses number theory concepts	b. Uses number theory concepts	b. Uses number theory concepts
c. Uses place value to two-digit numbers	c. Uses place value to three-digit numbers	c. Uses whole number place value to three-digit numbers to 1,000.	c. Adds, subtracts, multiplies, and divides whole numbers	c. Uses place value to nine-digit numbers	c. Uses place value for any given number through millions
d. Compares and orders numbers	d. Compares and orders numbers particularly in groups of 10.	d. Compares and orders whole numbers	d. Compares and orders numbers and fractions	d. Compares and orders numbers and fractions	d. Compares and orders numbers
e. Represents numbers	e. Represents numbers	e. Represents numbers using place value notation (expanded form)	e. Represents numbers	e. Represents numbers and decimals	e. Represents fractions, decimals, and percents

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f. Understands fraction concepts	f. Understands fraction concepts	f. Understands fraction concepts: 1/4, 1/3, 1/2	f. Understands fraction concepts	f. Understands fraction concepts in relation to decimals	f. Understands fraction concepts
<b>Interval Benchmark 2: Understands the properties of operations</b>			<b>Interval Benchmark 2: Understands the properties of operations</b>		
<b>Grade Level Expectations K</b>	<b>Grade Level Expectations 1</b>	<b>Grade Level Expectations 2</b>	<b>Grade Level Expectations 3</b>	<b>Grade Level Expectations 4</b>	<b>Grade Level Expectations 5</b>
a. Applies the properties of addition and subtraction	a. Applies the properties of addition (associative and commutative) and subtraction	a. Applies the properties of addition (associative and commutative) and subtraction	a. Applies the properties of multiplication and division (associative and commutative)	a. Applies the properties of multiplication and division (associative and commutative)	a. Applies the properties of multiplication and division (associative and commutative)
<b>Interval Benchmark 3: Computes fluently and makes reasonable estimates</b>			<b>Interval Benchmark 3: Computes fluently and makes reasonable estimates</b>		
<b>Grade Level Expectations K</b>	<b>Grade Level Expectations 1</b>	<b>Grade Level Expectations 2</b>	<b>Grade Level Expectations 3</b>	<b>Grade Level Expectations 4</b>	<b>Grade Level Expectations 5</b>
a. Adds and subtracts whole numbers	a. Adds and subtracts whole numbers	a. Adds and subtracts multi-digit whole numbers	a. Adds and subtracts multi-digit numbers, and multiplies and divides single-digit whole numbers	a. Performs operations with whole numbers fractions, and decimals	a. Performs operations with whole numbers, fractions, and decimals
b. Applies mental strategies to perform addition and subtraction	b. Applies mental strategies to perform addition and subtraction	b. Applies mental strategies to perform addition and subtraction	b. Applies mental strategies to perform computation	b. Applies mental strategies to perform computation	b. Applies mental strategies to perform computation
c. Uses estimation strategies	c. Uses estimation strategies	c. Uses estimation strategies	c. Uses estimation strategies	c. Uses estimation strategies	c. Uses estimation strategies
d. Solves addition and subtraction problems	d. Solves addition and subtraction problems	d. Solves addition, subtraction, and multiplication (1's, 2's, and 5's) problems	d. Solves single-step problems involving computation	d. Solves multiple-step problems	d. Solves multiple-step problems

## K-5 MATH Standards/Benchmarks/Grade Level Expectations (GLE)

*Updated 1/16/08*

<b>Standard 3: Understands and applies concepts of measurement.</b>					
<b>Interval Benchmark 1: Understands measurable attributes and the process of measurement.</b>			<b>Interval Benchmark 1: Understands measurable attributes and the process of measurement</b>		
Grade Level Expectations <b>K</b>	Grade Level Expectations <b>1</b>	Grade Level Expectations <b>2</b>	Grade Level Expectations <b>3</b>	Grade Level Expectations <b>4</b>	Grade Level Expectations <b>5</b>
a. Compares and orders objects according to their measurable attributes	a. Compares and orders objects according to their measurable attributes	a. Compares and orders objects according to their measurable attributes	a. Compares and orders objects according to their measurable attributes	a. Compares and orders objects according to their measurable attributes	a. Compares and orders objects according to their measurable attributes
b. Applies the process of measurement	b. Applies the process of measurement	b. Applies the process of standard measurement	b. Applies the process of measurement using fractions	b. Applies the process of measurement using fractions	b. Applies the process of measurement using fractions
<b>Interval Benchmark 2: Uses a variety of techniques for measurement</b>			<b>Interval Benchmark 2: Uses a variety of techniques for measurement</b>		
Grade Level Expectations <b>K</b>	Grade Level Expectations <b>1</b>	Grade Level Expectations <b>2</b>	Grade Level Expectations <b>3</b>	Grade Level Expectations <b>4</b>	Grade Level Expectations <b>5</b>
a. Recognizes and writes money amounts	a. Recognizes and writes money amounts	a. Recognizes and writes money amounts	a. Selects the appropriate unit for a measurement situation	a. Selects the appropriate unit for a measurement situation	a. Selects the appropriate unit for a measurement situation
b. Describes time using familiar words	b. Describes time using familiar words	b. Describes time using familiar words	b. Converts measurements within systems	b. Converts measurements within systems	b. Converts measurements within systems
c. Uses instruments of measurement	c. Uses instruments of measurement	c. Uses instruments of measurement and units of measurement	c. Uses appropriate techniques to make change	c. Uses appropriate techniques to make change	c. Uses appropriate techniques to make change
d. Makes measurement estimates and checks for accuracy	d. Makes measurement estimates and checks for accuracy	d. Makes measurement estimates and checks for accuracy	d. Calculates elapsed time	d. Calculates elapsed time	d. Calculates elapsed time
e.	e.	e.	e. Uses the appropriate tool for a measurement situation	e. Uses the appropriate tool for a measurement situation	e. Uses the appropriate tool for a measurement situation
f.	f.	f.	f. Determines the perimeter of simple figures	f. Determines the perimeter of simple figures	f. Determines the perimeter of simple figures
			h. Uses appropriate strategies to estimate measurement	g. Determines the area of a square and rectangle	g. Uses appropriate strategies to estimate measurement
			i. Makes measurement estimates and checks for accuracy	h. Uses appropriate strategies to estimate measurement	h. Makes measurement estimates and checks for accuracy

**K-5 MATH Standards/Benchmarks/Grade Level Expectations (GLE)**

*Updated 1/16/08*

				i. Makes measurement estimates and checks for accuracy	
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**Standard 4: Understands and applies properties of geometry.**

<b>Interval Benchmark 1: Identifies similarities and differences between simple geometric shapes</b>	<b>Interval Benchmark 1: Identifies similarities and differences between simple geometric shapes</b>
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Grade Level Expectations K	Grade Level Expectations 1	Grade Level Expectations 2	Grade Level Expectations 3	Grade Level Expectations 4	Grade Level Expectations 5
a. Names common plane shapes and describes in a variety of ways (e.g. with different sizes or orientations)	a. Names common plane and solid shapes	a. Uses attributes to identify and describe plane and solid shapes	a. Identifies and compares plane and solid figures	a. Compares quadrilaterals by their attributes	a. Classifies plane and solid figures according to their properties
b.	b. Sorts common plane and solid shapes by their attributes	b. Sorts common plane and solid shapes by their attributes	b. Sorts common plane and solid shapes by their attributes	b. Compares figures using properties of lines	b. Compares triangles by their properties
c.	c. Constructs and deconstructs plane and solid figures to build understanding of part-whole relationship	c.	c.	c. Compares figures using properties of angles	c.

<b>Interval Benchmark 2: Uses coordinate geometry to verify relationships</b>	<b>Interval Benchmark 2: Uses coordinate geometry to verify relationships</b>
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Grade Level Expectations K	Grade Level Expectations 1	Grade Level Expectations 2	Grade Level Expectations 3	Grade Level Expectations 4	Grade Level Expectations 5
a. Understands the positional words to locate objects	a. Uses positional words to describe positions of objects in space	a. Describes direction and distance on the coordinate plane	a. Describes location using the coordinate plane	a. Uses the coordinate plane to specify locations, describe paths, and find distance between points	a. Uses the coordinate plane to specify locations, describe paths, and find distance between points
b.	b. Uses coordinate plane to locate objects	b.	b.	b.	b.



## K-5 MATH Standards/Benchmarks/Grade Level Expectations (GLE)

Updated 1/16/08

Interval Benchmark 2: Uses statistical methods to describe data			Interval Benchmark 2: Uses statistical methods to describe data		
Grade Level Expectations K	Grade Level Expectations 1	Grade Level Expectations 2	Grade Level Expectations 3	Grade Level Expectations 4	Grade Level Expectations 5
a. Describes the data as a whole	a. Describes the data looking at parts of the whole	a. Makes comparisons based on data	a. Makes comparisons based on related data sets	a. Describes a data set using averages	a. Compares two data sets using central tendency
Interval Benchmark 3: Reads and interprets data			Interval Benchmark 3: Reads and interprets data		
Grade Level Expectations K	Grade Level Expectations 1	Grade Level Expectations 2	Grade Level Expectations 3	Grade Level Expectations 4	Grade Level Expectations 5
a. Reads and interprets information from graphs	a. Reads and interprets information from graphs or charts	a. Reads and interprets information from graphs or charts	a. Reads information from graphs and tables	a. Reads information from graphs and tables	a. Reads information from graphs and tables
b.	b.	b.	b. Interprets information from graphs	b. Interprets information from graphs	b. Interprets information from graphs
Interval Benchmark 4: Uses probability concepts			Interval Benchmark 4: Uses probability concepts		
Grade Level Expectations K	Grade Level Expectations 1	Grade Level Expectations 2	Grade Level Expectations 3	Grade Level Expectations 4	Grade Level Expectations 5
a. Identifies the likelihood of an event	a. Identifies events that are more likely to occur than others	a. Identifies events that can be predicted	a. Describes and applies the concept of probability	a. Describes and applies the concept of probability	a. Understands the meaning of statistical predictions
<b>Standard 6: Understands and applies concepts of algebra and functions.</b>					
Interval Benchmark 1: Creates and extends simple patterns			Interval Benchmark 1: Creates and extends simple patterns		
Grade Level Expectations K	Grade Level Expectations 1	Grade Level Expectations 2	Grade Level Expectations 3	Grade Level Expectations 4	Grade Level Expectations 5
a. Uses concrete objects and drawings to create, copy, and extend simple patterns	a. Identifies simple numeric patterns	a. Identifies patterns that occur in numbers and number combinations	a. Extends a linear pattern	a. Describes numerical patterns	a. Makes generalizations about patterns
b. Finds patterns in the environment	b.	b. Determines rules for patterns of objects, symbols, and numbers	b.	b.	b.
c.	c.	c. Solves problems using simple number patterns	c.	c.	c.

## K-5 MATH Standards/Benchmarks/Grade Level Expectations (GLE)

Updated 1/16/08

<b>Interval Benchmark 2: Sorts, classifies, and orders objects</b>			<b>Interval Benchmark 2: Sorts, classifies, and orders objects</b>		
<b>Grade Level Expectations K</b>	<b>Grade Level Expectations 1</b>	<b>Grade Level Expectations 2</b>	<b>Grade Level Expectations 3</b>	<b>Grade Level Expectations 4</b>	<b>Grade Level Expectations 5</b>
a. Classifies objects according to physical attributes	a. Sorts and reclassifies objects	a. Uses multiple attributes to sort and classify objects	a.	a. Describes the connection between a function and its rule	a. Describes a function by its rule
<b>Interval Benchmark 3: Uses concrete, pictorial, and verbal representations to understand symbolic notations</b>			<b>Interval Benchmark 3: Uses concrete, pictorial, and verbal representations to understand symbolic notations</b>		
<b>Grade Level Expectations K</b>	<b>Grade Level Expectations 1</b>	<b>Grade Level Expectations 2</b>	<b>Grade Level Expectations 3</b>	<b>Grade Level Expectations 4</b>	<b>Grade Level Expectations 5</b>
a. Uses concrete objects to represent symbolic notations	a. Uses drawings to represent symbolic notations	a. Uses symbols to represent symbolic notations	a. Uses symbols in number sentences	a. Recognizes symbols in number sentences are variables	a. Uses variables and numbers interchangeably
					b. Uses operation properties to simplify expressions
<b>Interval Benchmark 4: Uses models to represent mathematical situations</b>			<b>Interval Benchmark 4: Uses a variety of strategies to represent and solve mathematical situations</b>		
<b>Grade Level Expectations K</b>	<b>Grade Level Expectations 1</b>	<b>Grade Level Expectations 2</b>	<b>Grade Level Expectations 3</b>	<b>Grade Level Expectations 4</b>	<b>Grade Level Expectations 5</b>
a. Uses concrete objects to represent symbolic notations	a. Uses drawings to represent addition, subtraction, repeated addition	a. Uses symbols to represent addition, subtraction, and simple addition (simple multiplication)	a. Uses expressions and equations to represent problem situations	a. Uses expressions and equations to represent problem situations	a. Uses expressions and equations to represent problem situations
b.	b.	b. Writes and solves an equation for a single-step or a multiple-step problem	b. Solves problems involving equations and inequalities	b. Solves a single- or multiple-step problem	b. Writes and solves an equation for a multiple-step problem involving whole numbers
<b>Interval Benchmark 5: Describes change in a variety of situations</b>			<b>Interval Benchmark 5: Describes change in a variety of situations</b>		
<b>Grade Level Expectations K</b>	<b>Grade Level Expectations 1</b>	<b>Grade Level Expectations 2</b>	<b>Grade Level Expectations 3</b>	<b>Grade Level Expectations 4</b>	<b>Grade Level Expectations 5</b>
a. Recognizes qualitative and quantitative change	a. Describes qualitative and quantitative change	a. Describes qualitative and quantitative change	a. Describes change using tables and graphs	a. Identifies situations that have constant rates of change	a. Compares situations with constant or varying rates of change



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<b>Standard 8: Understands the general nature and uses of mathematics.</b>			
	<b>Interval Benchmark 1: Uses mathematics to model and predict real world situations.</b>		
	<b>Grade Level Expectations 3</b>	<b>Grade Level Expectations 4</b>	<b>Grade Level Expectations 5</b>
	a. Demonstrates that numbers and the operations performed on them can be used to describe things in the real world and predict what might occur	a. Demonstrates that numbers and the operations performed on them can be used to describe things in the real world and predict what might occur	a. Demonstrates that numbers and the operations performed on them can be used to describe things in the real world and predict what might occur
b. Demonstrates that mathematical ideas and concepts can be represented concretely, graphically, and symbolically	b. Demonstrates that mathematical ideas and concepts can be represented concretely, graphically, and symbolically	b. Demonstrates that mathematical ideas and concepts can be represented concretely, graphically, and symbolically	