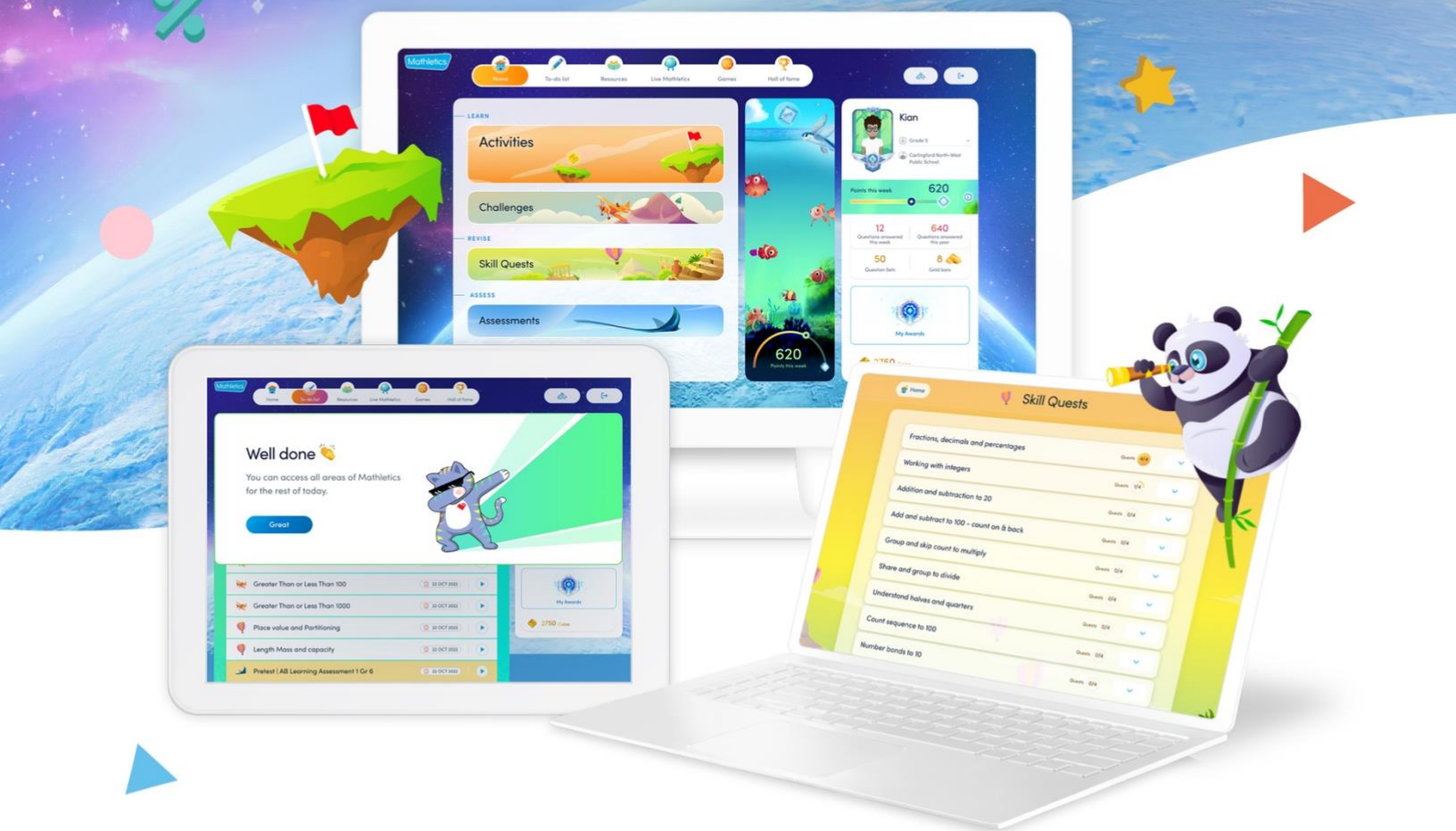
Mathletics

Indiana Academic Standards

Activities (Courses) and Skill Quests



Grades K-2

August, 2025

Mathletics

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Indiana Mathematics Standards

Activities (Courses)

August 2025

Kindergarten

1. Number Sense

Students explore the foundations of numbers through counting strategies, one-to-one correspondence, and place value of numbers up to 20.

K.NS.1 Count to at least 100 by ones and tens. Count by one from any given number.	
Course Topics	**Activities**
NS—Counting (up to 100)	Going Up
	Making Numbers Count
	Counting Forward

K.NS.2 Write whole numbers from 0 to 20 and identify number words from 0 to 10. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	
Course Topics	**Activities**
NS—Counting (up to 100)	Counting Up to 20
	Make Numbers Count
	Order Numbers to 20
	Order Numbers to 10

K.NS.3 Say the number names in standard order when counting objects, pairing each object with one and only one number name and each number name with one and only one object. Understand that the last number name said describes the number of objects counted and that the number of objects is the same regardless of their arrangement or the order in which they were counted. Count out the number of objects, given a number from 1 to 20.	
Course Topics	**Activities**
NS—Counting (up to 100)	How Many Dots?
	Dot Display
	Count to 5
	Matching Numbers to 10

K.NS.4 Identify sets of 1 to 10 objects in patterned arrangements and tell how many without counting.	
Course Topics	**Activities**
NS—Counting (up to 100)	Ordinal Numbers

K.NS.5 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (e.g., by using matching and counting strategies).	
Course Topics	**Activities**
NS—Comparing numbers	Picture Graphs: More or Less
	More, Less or the Same to 10
	More, Less or the Same to 20

K.NS.6 Compare the values of two numbers from 1 to 20 presented as written numerals.	
Course Topics	**Activities**
NS—Comparing numbers	Compare Numbers to 20

K.NS.7 Define and model a "ten" as a group of ten ones. Model equivalent forms of whole numbers from 10 to 20 as groups of tens and ones using objects and drawings.	
Course Topics	**Activities**
NS—Counting (up to 100)	Making Teen Numbers

2. Computation and Algebraic Thinking

Within the numbers 1-10, students use objects and drawings to model the composing (addition) and decomposing (subtraction) of numbers, and solve real-world problems. Students investigate beginning algebra concepts through simple repeating and growing patterns.

K.CA.1 Solve real-world problems that involve addition and subtraction within 10 using modeling with objects or drawings.	
Course Topics	**Activities**
CA—Additon & subtraction within 10	Adding to 5
	Subtracting From 5
	Adding to Ten
	All about Ten
	Subtracting from Ten
	Model Addition
	Addition Facts
	Model Subtraction

K.CA.2 Use objects or drawings to model the decomposition of numbers less than 10 into pairs in more than one way. Identify corresponding equations.	
Course Topics	**Activities**
CA—Additon & subtraction within 10	Composing Numbers to 10

K.CA.3 Find the number that makes 10 when added to the given number for any number from 1 to 9 (e.g., by using objects or drawings), and record the answer with a drawing or an equation.	
Course Topics	**Activities**
CA—Additon & subtraction within 10	Adding to Make 5 and 10
	Adding to 10 Word Problems

K.CA.4 Create, extend, and give an appropriate rule for simple repeating and growing patterns with numbers and shapes.	
Course Topics	**Activities**
CA—Additon & subtraction within 10	Doubles and Halves to 10

3. Geometry

Students investigate and compare two- and three-dimensional shapes based on simple attributes.

K.G.1 Compare two- and three-dimensional shapes in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners"), and other attributes (e.g., having sides of equal length).	
Course Topics	**Activities**
G—Investigating 2D & 3D shapes	Collect the Shapes
	Collect Simple Shapes
	Match the Solid 1
	Count Sides and Corners
	How many Edges?

4. Measurement

Students investigate beginning concepts of length, weight, capacity, temperature, and time through observations of direct comparisons.

K.M.1 Make direct comparisons of the length, capacity, weight, and temperature of objects, and identify which object is shorter, longer, taller, lighter, heavier, warmer, cooler, or holds more.	
Course Topics	**Activities**
M—Measurement comparisons	Compare Length
	Everyday Length
	Everyday Mass
	Balancing Act
	How Full?
	Which Holds More?

K.M.2 Identify and use appropriate terms to describe intervals of time including: morning, afternoon, evening, today, yesterday, tomorrow, day, week, month, and year; describe how calendars and clocks are tools to measure time.	
Course Topics	**Activities**
M—Intervals of time	Tomorrow and Yesterday (Scaffolded)
	Months After and Before
	Days: After and Before
	Calendar: Days and Dates
	Using a Calendar

5. Data Analysis

Students begin interacting with data to create and interpret data for patterns and comparison.

K.DA.1 With guidance, collect and organize data into simple bar graphs, pictographs, and/or tables to identify patterns and make comparisons.	
Course Topics	**Activities**
DA—Data collection	Comparing Groups of Objects
	Pictographs
	Analyzing Data

Grade 1

1. Number Sense

Represent and solve problems involving addition and subtraction.

1.NS.1 Count to at least 120 by ones, fives, and tens from any given number. In this range, read and write numerals and represent a number of objects with a written numeral.	
Course Topics	**Activities**
NS—Counting (up to 120)	Counting on a 100 grid
	Before, After & Between to 100
	Count by 2s, 5s and 10s

1.NS.2 Model place value concepts of two-digit numbers, multiples of 10, and equivalent forms of whole numbers using objects and drawings.	
Course Topics	**Activities**
NS—Place value concepts	Make Big Numbers Count
	Place Value 1
	Groups of Ten

1.NS.3 Match the ordinal numbers (e.g., first, second, third) with an ordered set of up to 20 items.	
Course Topics	**Activities**
NS—Place value concepts	Ordinal Numbers

1.NS.4 Use place value understanding to compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols > , = , and <.	
Course Topics	**Activities**
NS—Place value concepts	Compare Numbers to 50
	Greater or Less to 100
	Compare Numbers to 100
	Arranging Numbers

2. Computation and Algebraic Thinking

Within the numbers 1-20, students demonstrate fluency and apply addition and subtraction strategies to solve real-world problems. Students apply place value and number sense to add numbers within 100 and investigate beginning algebra concepts through the growing number patterns within 100.

1.CA.1 Demonstrate fluency with addition facts and the corresponding subtraction facts within 20. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a 10 (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13). Model the role of 0 and the equal sign in addition and subtraction using objects or drawings.	
Course Topics	**Activities**
CA—Addition & subtraction (up to 100)	Addictive Addition
	Adding In Any Order
	Commutative Property of Addition
	Fact Families: Add and Subtract

1.CA.2 Solve real-world problems involving addition and subtraction within 20 in situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all parts of the addition or subtraction problem (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem).	
Course Topics	**Activities**
CA—Addition & subtraction (up to 100)	Add and Subtract Problems
	Adding to 10 Word Problems
	Problems: Add and Subtract

1.CA.3 Using number sense and place value strategies, add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10. Use models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; describe the strategy and explain the reasoning used.	
Course Topics	**Activities**
CA—Addition & subtraction (up to 100)	Add Three 1-Digit Numbers
	Add 3 Numbers Using Bonds to 10
	1 More, 10 Less
	Subtract Tens

1.CA.4 Create, extend, and give an appropriate rule for number patterns using addition within 100.	
Course Topics	**Activities**
Teacher directed	

3. Geometry

Students make observations about a shape's defining attributes and utilize them to classify, draw, and compose two-dimensional or three-dimensional shapes. Students begin exploring fractional foundations through the partitioning of rectangles and circles.

1.G.1 Distinguish between defining attributes of two- and three-dimensional shapes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size). Create and draw two-dimensional shapes with defining attributes.	
Course Topics	**Activities**
G—Shapes	Match the Solid 2

1.G.2 Use two-dimensional shapes (e.g., rectangles, squares, trapezoids, triangles, half-circles, quarter-circles) or three-dimensional shapes (e.g., cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. [In grade 1, students do not need to learn formal names such as "right rectangular prism."]	
Course Topics	**Activities**
G—Shapes	Relate Shapes and Solids

1.G.3 Partition circles and rectangles into two and four equal parts; describe the parts using the words halves, fourths, and quarters; and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of, the parts. Understand for partitioning circles and rectangles into two and four equal parts that decomposing into equal parts creates smaller parts.	
Course Topics	**Activities**
G—Shapes	Is it Half?
	Halves and Quarters
	Shade Fractions

4. Measurement

Using standard and non-standard measurements, students compare and order objects, tell time to the hour and half-hour, and investigate beginning concepts of money.

1.M.1 Use direct comparison or a nonstandard unit to compare and order objects according to length, area, capacity, weight, and temperature.	
Course Topics	**Activities**
M—Measurement comparisons	Comparing Length
	Compare Length 1
	Compare Length
	Measuring Length with Blocks
	Everyday Length

1.M.2 Tell and write time to the nearest half-hour and relate time to events (before/after, shorter/longer) using analog clocks. Explain how to read hours and minutes using digital clocks.	
Course Topics	**Activities**
M—Measurement comparisons	Hour Times
	Half Hour Times
	Tell Time to the Half Hour

1.M.3 Identify the value of a penny, nickel, dime, and a collection of pennies, nickels, and dimes.	
Course Topics	**Activities**
Teacher directed	

5. Data Analysis

Students collect, organize, and evaluate simple data using grade-level appropriate strategies.

1.DA.1 With guidance, collect data from a simple survey or collaborative investigation; organize data into appropriate single-unit bar graphs, pictographs, and/or tables and draw conclusions based on mathematical observations, comparisons, and grade-level computation strategies.	
Course Topics	**Activities**
DA—Data collection	Picture Graphs: More or Less
	Comparing Groups of Objects
	Pictographs
	Analyzing Data

Grade 2

1. Number Sense

Students fluently count, read, and represent numbers up to 1,000 using place value concepts.

2.NS.1 Count by ones, twos, fives, tens, and hundreds up to at least 1,000 from any given number.	
Course Topics	**Activities**
NS—Numbers (up to 1,000)	Counting by Fives
	Counting by Tens
	Count by 2s, 5s and 10s
	Counting on a 100 grid

2.NS.2 Read and write whole numbers up to 1,000. Use words, models, standard form, and expanded form to represent and show equivalent forms of whole numbers up to 1,000.	
Course Topics	**Activities**
NS—Numbers (up to 1,000)	Place Value 3
	Understanding Place Value 2

2.NS.3 Determine whether a group of objects (up to 20) has an odd or even number of members (e.g., by placing that number of objects in two groups of the same size and recognizing that for even numbers no object will be left over and for odd numbers one object will be left over, or by pairing objects or counting them by twos).	
Course Topics	**Activities**
NS—Numbers (up to 1,000)	Odd and Even Numbers 1
	Odd or Even

2.NS.4 Define and model a "hundred" as a group of ten tens. Model place value concepts of three-digit numbers, multiples of 100, and equivalent forms of whole numbers using objects and drawings.	
Course Topics	**Activities**
NS—Place value	Model Numbers
	Understanding Place Value 1
	Place Value 2

2.NS.5 Use place value understanding to compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using > , = , and < symbols to record the results of comparisons.	
Course Topics	**Activities**
NS—Place value	Which Is Greater?
	Which Is Less?

2. Computation and Algebraic Thinking

Within the numbers 1-100, students apply place value concepts and addition and subtraction concepts to solve real-world problems and reason about their strategies and solutions. Students explore effects of properties of addition on solutions and investigate number patterns, and apply concepts of addition and subtraction within 1,000.

2.CA.1 Solve real-world problems involving addition and subtraction within 100 in situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all parts of the addition or subtraction problem (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem). Use estimation to decide whether answers are reasonable in addition problems.	
Course Topics	**Activities**
CA—Addition & subtraction	Complements to 50 and 100
	Complements to 10, 20, 50
	Add Two 2-Digit Numbers: Regroup
	Add Three 2-Digit Numbers: Regroup
	Columns that Add

2.CA.2 Using number sense and place value strategies, add and subtract within 1,000, including composing and decomposing tens and hundreds. Use models, drawings, and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; describe the strategy and explain the reasoning used.	
Course Topics	**Activities**
CA—Addition & subtraction	Add 3-Digit Numbers
	Add 3-Digit Numbers: Regroup
	Strategies for Column Addition

2.CA.3 Show that the order in which two numbers are added (commutative property) and how the numbers are grouped in addition (associative property) will not change the sum. These properties can be used to show that numbers can be added in any order. Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form.	
Course Topics	**Activities**
CA—Addition & subtraction	Add 3 Numbers: Bonds to 100
	Add 3 Numbers: Bonds to Multiples of 10
	Addition Properties
	Commutative Property of Addition
	Adding In Any Order

2.CA.4 Create, extend, and give an appropriate rule for number patterns using addition and subtraction within 1,000.	
Course Topics	**Activities**
CA—Addition & subtraction	Bar Model Problems 1
	Bar Model Problems 2

3. Geometry

Students investigate and classify two- and three-dimensional shapes based on faces, sides, and vertices, and investigate the results of composing and decomposing each shape. Students continue to build foundational fraction knowledge through specific partitioning and naming of rectangles and circles.

2.G.1 Identify, describe, and classify two- and three-dimensional shapes (i.e., triangle, square, rectangle, cube, right rectangular prism) according to the number and shape of faces and the number of sides and/or vertices. Draw two-dimensional shapes.	
Course Topics	**Activities**
G—Attributes of shapes	How Many Faces?
	How many Edges?
	How many Corners?
	Count Sides and Corners

2.G.2 Investigate and predict the result of composing and decomposing two- and three-dimensional shapes.	
Course Topics	**Activities**
G—Attributes of shapes	Relate Shapes and Solids

2.G.3 Partition a rectangle into rows and columns of same-size (unit) squares and count to find the total number of same-size squares.	
Course Topics	**Activities**
G—Partition shapes	Bigger or Smaller Shape
	Calculate Area of Shapes (inches, feet, yards)

2.G.4 Partition circles and rectangles into two, three, or four equal parts; describe the shares using the words halves, thirds, half of, a third of, etc.; and describe the whole as two halves, three thirds, or four fourths. Recognize that equal parts of identical wholes need not have the same shape.	
Course Topics	**Activities**
G—Partition shapes	Shade Fractions
	Halves and Quarters

4. Measurement

Students use appropriate tools, computation strategies, and relationships of measurement to solve real-world problems including measurements of length and capacity, telling time to the nearest five minutes, and collections of coins and dollars.

2.M.1 Describe the relationships among an inch, foot, and yard. Describe the relationship between a centimeter and meter.	
Course Topics	**Activities**
M—Length	Measuring Length
	How Long Is That (Customary)?
	Centimetres and Metres

2.M.2 Estimate and measure the length of an object by selecting and using appropriate tools, such as rulers, yardsticks, meter sticks, and measuring tapes to the nearest inch, foot, yard, centimeter, and meter.	
Course Topics	**Activities**
M—Length	Measure to the Nearest Half Inch
	Inches, Feet, Yards
	How Long is That?

2.M.3 Estimate and measure volume (capacity) using cups and pints. Add and subtract to solve real-world problems involving capacities that are given in the same units or obtained through investigations.	
Course Topics	**Activities**
M—Volume	Cups, Pints, Quarts, Gallons

2.M.4 Tell and write time to the nearest five minutes from analog clocks, using a.m. and p.m. Solve real-world problems involving addition and subtraction of time intervals on the hour or half hour.	
Course Topics	**Activities**
M—Time	Five Minute Times
	Tell Time to the Hour
	Tell Time to the Half Hour
	Half Hour Times

2.M.5 Describe relationships of time, including seconds in a minute; minutes in an hour; hours in a day; days in a week; and days, weeks, and months in a year.	
Course Topics	**Activities**
M—Time	Tomorrow and Yesterday (Scaffolded)
	Months After and Before

2.M.6 Find the value of a collection of pennies, nickels, dimes, quarters, and dollars.	
Course Topics	**Activities**
M—Money	Money - Totalling (USD)
	Who's got the Money?
	Pennies, Nickels, and Dimes
	Count Money (USD)

5. Data Analysis

Students interact with a variety of data collection models and evaluate mathematical relationships within the data using grade-level appropriate strategies.

2.DA.1 Collect, organize, and graph data from observations, surveys, and investigations using scaled bar graphs and pictographs (limit scale to 2s, 5s, 10s, and 100s); interpret mathematical relationships within the data using grade-level addition, subtraction, and comparison strategies.	
Course Topics	**Activities**
DA—Data collection	Making Picture Graphs: With Scale
	Picture Graphs: single-unit scale
	Bar Graphs 1

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