

KINDERGARTEN SECURE SKILLS

- ▶Verbally counts 20 or more objects in a random arrangement..
 - ▶Performs interrupted verbal counting beyond 100.
 - ▶Counts backward from 22 or higher.
 - ▶Counts by 2s beyond 30.
 - ▶Counts by 5s beyond 110.
 - ▶Counts by 10s beyond 110.
 - ▶Reads any number, 100 or less.
 - ▶Writes any number, 100 or less.
- ▶Understands basic meanings of addition and subtraction in real situations, in children's own number stories, in oral problems, with concrete objects and on number lines.
 - ▶Understands 2-digit numbers in terms of 10s and 1s.
- ▶Understands equivalent expressions as two or more different expressions of the same number.
 - ▶Recognizes many noncomputational uses of numbers through daily experiences.
 - ▶Estimates comfortably.
 - ▶Identifies and uses measuring tools for linear, weight, and volume measures.
 - ▶Performs simple data collection and graphing.
- ▶Has experience with basic geometry shapes and symmetry concepts; recognizes and names basic plane and solid figures.
 - ▶Knows the value of a penny, nickel, and dime; recognizes a quarter.
 - ▶Estimates times on an analog clock using only the hour hand.

GRADE 1 SECURE SKILLS

Numeration

- ▶ Read and write 2-digit and 3-digit numbers to 120
- ▶ Perform rational counting (2s to 30, 5s to 120 and backwards from 30)
 - ▶ Identify place value in 2-digit numbers
 - ▶ identify half of a set of concrete objects
 - ▶ Odd and even quantities to 12
- ▶ Represent whole numbers to 20 in various ways (name collection boxes)

Operations and Computation

- ▶ Understand meaning of addition/subtraction
 - ▶ Solve addition/subtraction number stories
- ▶ Find patterns in addition/subtraction facts (not a standard)
 - ▶ Add/subtract using a number grid (not a standard)
 - ▶ Basic +/- facts to 10
 - ▶ Adding 3 one-digit numbers

Patterns, Functions, and Algebra

- ▶ Add and subtract using a number grid (not a standard)
- ▶ Find patterns in addition and subtractions facts (not a standard)
 - ▶ Use symbols +, -, = (not a standard)
- ▶ Write/solve addition and subtractions number sentences
- ▶ Sort, classify and compares objects based on attributes
 - ▶ Extending patterns

Measurement and Reference Frames: Measurement

- ▶ Measure to the nearest inch
- ▶ Recognize pennies and nickels
- ▶ Use cents notation (not a standard)
 - ▶ Recognize dimes
 - ▶ Recognize quarters
- ▶ Show money amounts with coins to \$1.00

Measurement and Reference Frames: Reference Frames

- ▶ Tell time on the hour (analog and digital)
 - ▶ Tell time on the half-hour
- ▶ Tell time on the quarter-hour (not a standard)
- ▶ Using calendar - identifies date, day, month, year, yesterday, today and tomorrow

GRADE 2 SECURE SKILLS

Numbers and Routines

- ▶ Recognize, create and extend repeating, growing and shrinking patterns using numbers, concrete objects and pictures
 - ▶ Read, write with numerals, compare and order numbers to 999
 - ▶ Count by 2's, 5's, 10's from any given whole number
- ▶ Know relationships among units of time such as minutes in an hour, days in a month, and weeks in a year
- ▶ Understand and demonstrate the significance of groups of 10 in the base 10 number system
 - ▶ Represent numbers in equivalent ways
- ▶ Generate equivalent expressions for a given number such as $24=17+7$ or $24=100-76$
 - ▶ Read, write with numerals, compare and order numbers to 999

Addition and Subtraction Facts

- ▶ Use 1- and 2-digit addition and subtraction to solve real world and mathematical problems
- ▶ Describe what happens when 0 is added to a number or subtracted from a number
 - ▶ Understand that adding 2 numbers in any order results in the same sum
 - ▶ Represent numbers in equivalent ways
 - ▶ Determine the truth-value of an equation such as: true or false? $7=5+1$
- ▶ Generate equivalent expressions for a given number such as $24=17+7$ or $24=100-76$
- ▶ Demonstrate understanding of the relationships between odd and even numbers in addition and subtraction such as, $\text{odd} + \text{odd} = \text{even}$ or $\text{odd} - \text{even} = \text{odd}$

Place Value, Money and Time

- ▶ Understand and demonstrate the significance of groups of 10 in the Base 10 number system
- ▶ Read and write amounts of money using \$ for dollar ¢ for cents, and proper placement of the decimal point with amounts of money
 - ▶ Combine coins to create amounts up to \$1.00
- ▶ Tell time to the quarter hour, half hour, and hour using analog and digital clocks, distinguishing between a.m. and p.m.
 - ▶ Collect and record categorical data
 - ▶ Identify patterns in graphs or data sets
- ▶ Count by 2's, 5's, 10's from any given whole number

Addition and Subtraction

- ▶ Use 1- and 2-digit addition and subtraction to solve real-world and mathematical problems
 - ▶ Read, write with numerals, compare and order numbers to 999

3-D and 2-D Shapes

- ▶ Sort, classify, compare and describe 2-D and 3-D objects according to their geometrical attributes
- ▶ Investigate and predict the results of putting together and taking apart 2-D and 3-D shapes

Whole-Number Operations and Number Stories

- ▶ Use 1- and 2-digit addition and subtraction to solve real-world and mathematical problems
- ▶ Understand the concept of multiplication as repeated addition or in rectangular arrays
 - ▶ Understand the concept of division as repeated subtraction or sharing equally
- ▶ Understand that grouping numbers in multiple addend problems, any order, results in the same sum
 - ▶ Collect and record categorical data
 - ▶ Identify patterns in graphs or data sets
 - ▶ Create symmetrical patterns and designs

Patterns and Rules

- ▶ Recognize, create and extend repeating, growing and shrinking patterns using numbers, concrete objects, and pictures
 - ▶ Count by 2's, 5's, 10's from any given whole number
- ▶ Collect and record categorical data and identify patterns in graphs or data sets

Fractions

- ▶ Recognize, name, compare, and represent unit fractions with drawings or concrete materials

Measurement

- ▶ Estimate standard and non-standard linear measurements, then measure to check the answer

Decimals and Place Value

- ▶ Understand and demonstrate the significance of groups of 10 in the Base 10 number system
- ▶ Read and write amounts of money using \$ for dollar, ¢ for cents, and proper placement of the decimal point with amount of money

Whole-Number Operations Revisited

- ▶ Use 1- and 2-digit addition and subtraction to solve real-world and mathematical problems
 - ▶ Understand the concept of multiplication as repeated addition or rectangular mathematical problems
- ▶ Understand the concept of multiplication as repeated addition or rectangular arrays
 - ▶ Understand the concept of division as repeated subtraction or sharing equally

Year-End Reviews and Extensions

- ▶ Understand the concept of multiplication as repeated addition or rectangular arrays
 - ▶ Understand the concept of division as repeated subtraction or sharing equally
 - ▶ Tell time to the quarter hour, half hour, and hour using analog and digital clocks, distinguishing between a.m. and p.m.
- ▶ Know relationships among units of time such as minutes in an hour, days in a month, and weeks in a year

GRADE 3 SECURE SKILLS

Routines, Review & Assessment

- ▶ Read, write with numerals, compare and order whole numbers to 9,999
- ▶ Select an appropriate tool and identify the appropriate unit to measure time, length, weight and temperature
 - ▶ Tell time to the minute using digital and analog time
 - ▶ Represent up to 4-digit whole numbers in various ways
 - ▶ Make change using as few coins as possible up to a dollar
 - ▶ Determine elapsed time to the minute

Adding & Subtracting Whole Numbers

- ▶ Use properties of addition and subtraction that involve ordering, grouping and the number 0, to do simple computations with whole numbers
- ▶ Use inverse relationship of addition and subtraction to complete and check results
- ▶ Identify a missing number or operation in a simple arithmetic equation such as
$$3 _ 4 = 7 \text{ or } 9 - _ = 2$$
- ▶ Use subtraction with up to three digit whole numbers in real-world and mathematical problems
- ▶ Use addition of up to three whole number addends, containing up to four digits in real-world and mathematical problems
 - ▶ Demonstrate mastery of basic addition facts for addends 0 through 4 without a calculator
- ▶ Demonstrate mastery of basic subtraction facts that are inverse of basic addition facts, without a calculator

Linear Measures and Area

- ▶ Use subtraction with up to three digit whole numbers in real world and mathematical problems
 - ▶ Find the perimeter of a polygon with whole numbers sides
- ▶ Identify, describe and classify two-dimensional shapes according to number and length of sides and kinds of angles
- ▶ Select an appropriate tool and identify the appropriate unit to measure time, length, weight and temperature

Multiplication and Division

- ▶ Demonstrate an understanding of the multiplication facts through 10 using concrete models
- ▶ Use models to solve multiplication and division problems and use number sentences to record solutions
- ▶ Select and appropriate tool and identify the appropriate unit to measure time, length, weight and temperature

Place Value in Whole Numbers and Decimals

- ▶ Read, write with numerals, compare and order numbers to 9,999
- ▶ Collect data using observations or surveys and represent the data with pictographs and line plots with appropriate title and key

Geometry

- ▶ Identify, describe and classify two-dimensional shapes according to number and length of sides and kind of angles
 - ▶ Identify lines of symmetry in geometric shapes
 - ▶ Identify common two and three dimensional shapes that are components of more complex shapes
 - ▶ Create and identify patterns in numbers and shapes
- ▶ Recognize and predict the position and orientation of a shape after a single flip slide or turn

Fractions

- ▶ Know how fractions are related to whole, such as four fourths equal a whole or three fourths equal three of four equal parts of a whole

Measurement and Data

- ▶ Know relationships between units of length in a system of measurement, such as 12 inches equals 1 foot or 100 centimeters equals 1 meter
 - ▶ Read and interpret data from circle graphs using halves, thirds and quarters

Probability

- ▶ Explore the basic concept of probability

GRADE 4 SECURE SKILLS

Numeration

- ▶ Read and write numbers to millions
- ▶ Read and write numbers to hundred millions
 - ▶ Identify place value in numbers to millions
- ▶ Identify place value in numbers to hundred millions
- ▶ Name the values of digits in numbers to hundred millions
 - ▶ Make exchanges among place values
- ▶ Round whole numbers to a given place
 - ▶ Compare larger numbers
- ▶ Find equivalent names for numbers
 - ▶ Find factors of numbers
- ▶ Use dollars-and-cents notation
 - ▶ Compare money amounts
 - ▶ Explore uses of decimals
- ▶ Identify and name decimal numbers
- ▶ Model decimals with base-10 materials
 - ▶ Identify fractional parts of a region
 - ▶ Identify fractional parts of a set
 - ▶ Identify the whole for fractions
- ▶ Use a calculator to rename a fraction as a decimal or percent
- ▶ Explore uses for positive and negative numbers (integers)

Operations and Computation

- ▶ Solve addition/subtraction number stories
 - ▶ Add/subtract using a calculator
 - ▶ Practice basic facts
 - ▶ Practice extensions of basic facts
- ▶ Use mental arithmetic to add/subtract
 - ▶ Add/subtract multiples of 10
 - ▶ Add/subtract multiples of 100
 - ▶ Add/subtract 2-digit numbers
 - ▶ Add 3 or more 2-digit numbers
- ▶ Add/subtract 3- and 4-digit numbers
 - ▶ Add/subtract multidigit numbers
 - ▶ Use estimation to add/subtract
- ▶ Use addition/subtraction algorithms
- ▶ Practice multiplication/division facts
- ▶ Investigate relationships between multiplication and division
- ▶ Solve multiplication/division problems involving multiples of 10, 100 and 1,000
 - ▶ Use a calculator to multiply/divide

Patterns, Functions and Algebra

- ▶ Create patterns with 2-dimensional shapes
 - ▶ Explore and extend visual patterns
- ▶ Find patterns in addition and subtraction facts
- ▶ Find patterns in multiplication and division facts
 - ▶ Find equivalent names for numbers
- ▶ Write/solve addition and subtraction number sentences
 - ▶ Identify 2-dimensional shapes
- ▶ Create/extend designs with 2-dimensional shapes
 - ▶ Explore shape relationships
- ▶ Identify characteristics of 2-dimensional shapes
 - ▶ Construct/draw 2-dimensional shapes
 - ▶ Record designs with 2-dimensional shapes
- ▶ Explore similarities and differences among quadrilaterals
 - ▶ Form shapes by combining polygons
- ▶ Classify quadrilaterals according to side and angle properties
- ▶ Identify faces, edges, vertices, and bases of prisms and pyramids
 - ▶ Identify the shapes of faces
 - ▶ Identify symmetrical figures
 - ▶ Identify lines of symmetry
- ▶ Identify lines of reflection, reflected figures, and figures with line symmetry
 - ▶ Identify and name angles

Measurement and Reference Frames: Measurement

- ▶ Measure to the nearest foot
- ▶ Measure to the nearest inch
- ▶ Measure to the nearest $\frac{1}{2}$ inch
 - ▶ Investigate the mile
- ▶ Measure to the nearest $\frac{1}{4}$ inch
- ▶ Identify customary units of weight
- ▶ Use dollars-and-cents notation
 - ▶ Solve money number stories
 - ▶ Add/subtract money amounts
 - ▶ Divide money amounts

Measurement and Reference Frames: Reference Frames

- ▶ Solve time number stories
- ▶ Investigate 1-minute intervals
- ▶ Tell time to the nearest minute
- ▶ Solve temperature number stories

Data and Chance

- ▶ Make a tally chart
- ▶ Make a bar graph
- ▶ Find/use the median
- ▶ Find/use the minimum/maximum
- ▶ Interpret tables, graphs, and maps
 - ▶ Use data in problem solving
 - ▶ Summarize and interpret data

GRADE 5 SECURE SKILLS

Numeration

- ▶ Read and write numbers to millions
- ▶ Read and write numbers to hundred millions
 - ▶ Read and write numbers to billions
- ▶ Identify place value in numbers to millions
- ▶ Identify place value in numbers to hundred millions
 - ▶ Identify place value in numbers to billions
- ▶ Name the values of digits in numbers to hundred millions
 - ▶ Name the values of digits to billions
 - ▶ Make exchanges among place values
 - ▶ Round whole numbers to a given place
 - ▶ Compare larger numbers
 - ▶ Find equivalent names for numbers
 - ▶ Find factors of numbers
 - ▶ Find the prime factorization of numbers
- ▶ Rename numbers written in exponential notation
 - ▶ Identify square numbers
 - ▶ Identify even and odd numbers
 - ▶ Use dollars-and-cents notation
 - ▶ Compare money amounts
 - ▶ Explore uses of decimals
 - ▶ Identify and name decimal numbers
- ▶ Identify place value in decimals to thousandths
 - ▶ Read and write decimals to thousandths
 - ▶ Round decimals to a given place
 - ▶ Identify fractional parts of a region
 - ▶ Identify fractional parts of a set
 - ▶ Find equivalent fractions
 - ▶ Compare and order fractions
 - ▶ Explore uses of fractions
- ▶ Convert between mixed numbers and fractions
 - ▶ Find common denominators
 - ▶ Identify the whole for fractions
 - ▶ Find a fraction of a number
 - ▶ Relate fractions and decimals
- ▶ Give equivalencies between fractions, decimals, and percents
- ▶ Use a calculator to rename a fraction as a decimal or percent
 - ▶ Explore uses for positive and negative numbers (integers)
 - ▶ Convert between fractions, decimals, and percents

Operations and Computation

- ▶ Solve addition/subtraction number stories
 - ▶ Add/subtract using a calculator
 - ▶ Practice extensions of basic facts
 - ▶ Add/subtract 2-digit numbers
 - ▶ Add 3 or more 2-digit numbers
 - ▶ Add/subtract 3- and 4-digit numbers
 - ▶ Add/subtract multidigit numbers
 - ▶ Use estimation to add/subtract
 - ▶ Use addition/subtraction algorithms
 - ▶ Add/subtract 1- and 2-digit decimals
- ▶ Add/subtract whole numbers and decimals
 - ▶ Practice multiplication/division facts
- ▶ Practice extended multiplication/division facts
 - ▶ Use arrays to model multiplication
- ▶ Solve multiplication/division problems involving multiples of 10, 100 and 1,000
 - ▶ Multiply/divide multiples of 10, 100 and 1,000 by 1-digit numbers

Patterns, Functions and Algebra

- ▶ Explore and extend visual patterns
- ▶ Find equivalent names for numbers
- ▶ Write/solve addition and subtraction number sentences
 - ▶ Write/solve multiplication number sentences
 - ▶ Write/solve division number sentence

Geometry

- ▶ Identify 2-dimensional shapes
 - ▶ Explore shape relationships
- ▶ Identify characteristics of 2-dimensional shapes
 - ▶ Construct/draw 2-dimensional shapes
- ▶ Explore similarities and differences among quadrilaterals
 - ▶ Classify and name polygons
 - ▶ Identify properties of polygons
- ▶ Classify quadrilaterals according to side and angle properties
 - ▶ Define and create tessellations/frieze patterns
 - ▶ Identify 3-dimensional shapes
 - ▶ Identify characteristics of 3-dimensional shapes
 - ▶ Construct 3-dimensional shapes
- ▶ Identify faces, edges, vertices and bases of prisms and pyramids
 - ▶ Describe properties of geometric solids
 - ▶ Identify and name angles
 - ▶ Measure angles with degree units
 - ▶ Identify acute, obtuse, straight, and reflex angles
 - ▶ Make turns and fractions of turns; relate turns to angles
- ▶ Use full-circle and half-circle protractors to measure and draw angles

Measurement and Reference Frames: Measurement

- ▶ Measure to the nearest foot
- ▶ Measure to the nearest inch
- ▶ Measure to the nearest $\frac{1}{2}$ inch
- ▶ Measure to the nearest $\frac{1}{4}$ inch
- ▶ Measure to the nearest $\frac{1}{8}$ inch
- ▶ Establish personal references for metric units of length
- ▶ Establish personal references for customary units of length
 - ▶ Investigate area
 - ▶ Find the perimeters of irregular shapes
 - ▶ Find the perimeters of regular shapes
- ▶ Use formulas to find areas of rectangles, parallelograms, and triangles
 - ▶ Solve money number stories
 - ▶ Estimate costs
 - ▶ Divide money amounts
 - ▶ Multiply money amounts

Measurement and Reference Frames: Reference Frames

- ▶ Calculate elapsed time
- ▶ Convert units of time

Data and Chance

- ▶ Make a tall chart
- ▶ Make a bar graph
- ▶ Find/use the range
- ▶ Find/use the mode
- ▶ Find/use the median
- ▶ Find/use the mean
- ▶ Find/use the minimum/maximum
- ▶ Interpret tables, graphs, and maps
 - ▶ Use data in problem solving
 - ▶ Summarize and interpret data

GRADE SIX SECURE SKILLS

Numbers and Operations

- ▶ Work flexibly with fractions, decimals and percents to solve problems
 - ▶ Understand place value
- ▶ Estimate using a sense of the size of a number in a given context
 - ▶ Perform a series of calculations
 - ▶ Develop reasoning skills for solving equations
- ▶ compare and describe strategies to solve equations

Patterns, Functions and Algebra

- ▶ Recognize and use equivalencies
- ▶ Understand and use inverses (opposites)
- ▶ Recognize and investigate patterns and regularities

Geometry/Measurement

- ▶ Recognize and use symmetry and repetition
 - ▶ Estimate directions, turns and angles
 - ▶ Understand parallel and perpendicular
 - ▶ Estimate angle measurements

Data Analysis

- ▶ Use symbols to represent a situation shown graphically
 - ▶ Expand tables and charts
 - ▶ Organize information and solutions to problems
- ▶ Create, interpret and compare different kinds of graphs and data sets
- ▶ Describe data numerically using mean, median, mode, quartile, range, maximum and minimum
- ▶ Understand the concepts of representative sample and population