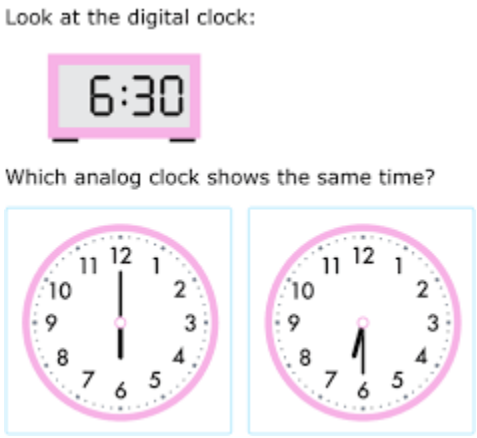
By the end of Kindergarten, students will be able to

- Count by ones and tens to 100
- Count backwards from 20
- Read and write numbers up to 30, count out objects up to 30, and compare groups that have more, fewer or the same number of objects up to 30
- Solve simple addition and subtraction problems up to 10
- Compare and describe objects by length, height, weight, volume and time
- Name, describe and compare circles, triangles, rectangles and squares
- Name the days of the week and the months of the year
- Use picture graphs and object graphs to represent data
- Identify, describe and extend repeating patterns

By the end of First Grade, students will be able to

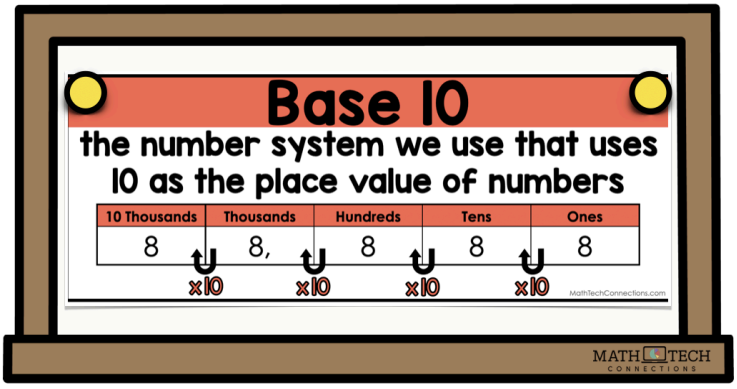
- Count by ones, fives and tens to 120
- Read, write, put in order and compare groups of objects up to 120
- Count backwards from 30 and count by twos to 30
- Identify pennies, nickels, and dimes; know how many pennies are equal to a nickel and to a dime; and count a collection of pennies, dimes or nickels up to 100 cents
- Identify fractions as equal shares with halves and fourths
- Know by memory addition and subtraction facts up to 10
- Recognize the symbols +,-,=,
- Solve and create addition and subtraction problems up to 20
- Compare measurements of length, weight and volume
- Describe, sort, draw and name circle, triangle, square and rectangle by sides, and angles

- Tell time to the half hour and hour on digital and analog clocks



- Identify specific days of the week and dates on the calendar
- Collect, organize, and represent data using picture graphs and tables
- Create, describe, continue and transfer repeating and growing patterns

By the end of Second Grade, students will be able to

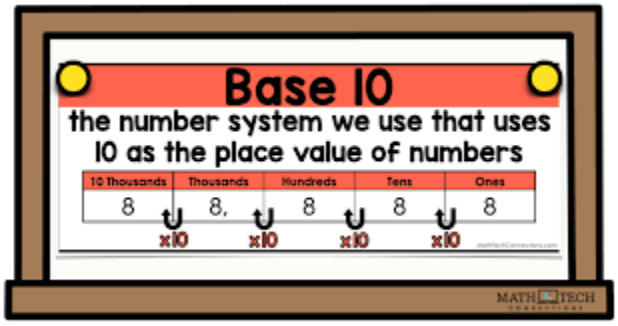
- Count by 1s, 5s, 10s, and 25s to 200
- Count by 2s to 50, count by 100s to 1000, and count backwards by 10s from 200
- Represent and describe even and odd numbers up to 50 with objects
- Use the base ten system to read, write, order, compare and represent numbers up to 999
- 

- Model and compare fractions/equal shares as halves, fourths, eighths, thirds and sixths
- Solve problems counting and representing amounts of money up to $2.00

- Know by memory addition and subtraction facts up to 20
- Solve multi-step addition and subtraction problems with numbers up to 100
- Recognize the symbol of not equal≠.
- Measure with inches, pounds and cups
- Use analog and digital clocks to tell time to the nearest 5 minutes
- Explore symmetry in rectangles, triangles, circles and squares; and will identify properties of 3D shapes sphere, cube, and rectangular prism
- Collect, organize, and interpret data from bar graphs and pictographs
- Describe, extend, create and transfer repeating and increasing patterns including the use of whole numbers.

By the end of Third Grade, students will be able to

- Use the base ten system to read, write, describe and model numbers up to 6 digits and compare and order numbers up to 9,999



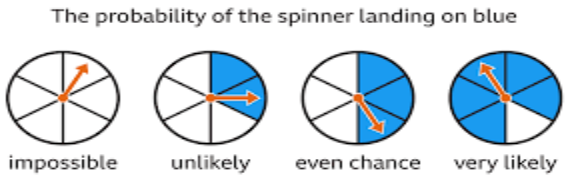
- Represent and compare fractions and mixed numbers with denominators of 2,3,4,5,6,8,10
- Solve problems counting, comparing, representing and making change for money up to five dollars ($5.00)
- Solve addition and subtraction problems with numbers up to 1,000
- Describe when an estimate or exact answer is necessary
- Round to the nearest 10 or 100
- Explain multiplication and division problems, and recall with understanding multiplication and division facts through 10 x 10

- Use standard measurement tools to measure length, weight, mass and volume to the nearest half inch, foot, yard, centimeter, meter, pound, kilogram, cup, pint quart, gallon and liter
- Estimate and determine area by counting square units of measure
- Estimate and determine perimeter of shapes up to six sides
- Read analog and digital clocks to the nearest minute and will solve problems of passing time to the nearest hour
- Identify, describe, compare, combine and subdivide polygons; name triangles, quadrilaterals, pentagons, hexagons and octagons
- Collect, organize and analyze data from picture and bar graphs with scales of multiples of 2,5,10
- Identify, describe, create and extend increasing and decreasing patterns

By the end of Fourth Grade, students will be able to

- Use the base ten system to read, write and identify the place value of each digit in a 9 digit whole number, and compare and order numbers up to seven digits
- Represent, compare and order mixed numbers, proper and improper fractions with denominators up to 12 *
- Represent, compare and order decimals through thousandths
- Represent mixed numbers and fractions- halves, fourths, fifths, tenths and hundredths- as decimals *
- Make estimates in addition subtraction, multiplication and division problems, and refine estimates
- Round to the nearest 100 or 1000 in subtraction and addition problems with numbers up to 10,000*
- Add or subtract two numbers up to 10,000*
- Estimate, represent, solve and justify solutions to addition and subtraction problems up to 1,000,000
- Recall with understanding multiplication and division facts up to 12x12 *
- Create an equation using addition, subtraction, multiplication, and division to represent the relationship between equivalent mathematical expressions (e.g., $4 \times 3 = 2 \times 6$; $10 + 8 = 36 \div 2$; $12 \times 4 = 60 - 12$).

- Determine factor pairs, common factors, and the greatest common factor of whole numbers up to 100
- Add or subtract two fractions, improper or proper, and simplify the resulting fraction
- Determine the sum or difference of two decimals through the thousandths
- Solve problems that involve length, weight/mass, and liquid volume using U.S. customary and metric units (e.g. inch, foot, yard, mile, millimeter, centimeter, meter; ounce, pound, gram, kilogram; cup, pint, quart, gallon, milliliter, liter)
- Solve single-step and multistep word problems involving elapsed time (limited to hours and minutes within a 12-hour period)
- Solve problems involving area and perimeter limited to rectangles and squares
- Identify and draw points, rays, line segments, angles, and lines including intersecting, parallel, and perpendicular lines
- Describe quadrilaterals and solid figures according to their characteristics (angles, vertices, edges, faces)
- Apply the data cycle (formulate questions, collect data, organize and represent data, and analyze and communicate results) with a focus on line graphs
- Model and determine the probability of an outcome of a simple event



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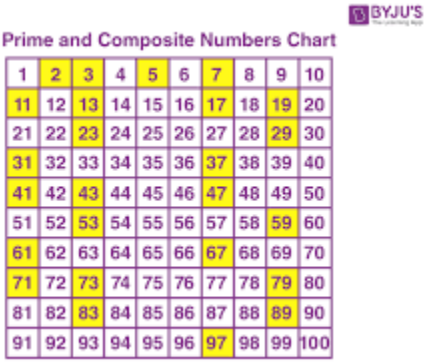
- Identify, describe, extend, and create increasing and decreasing patterns

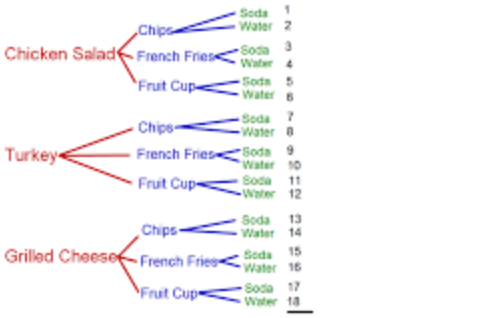
*indicates that on the state assessment the use of a calculator for these objectives is prohibited.

By the end of Fifth Grade, students will be able to

- Identify and represent equal fractions (with thirds, eighths, and factors of 100) and decimals
- Compare and order sets of fractions and decimals
- Demonstrate an understanding of prime and composite numbers and determine the prime factorization of a whole number up to 100



- Estimate the sum, difference, product, and quotient of whole numbers in word problems (may have remainders when interpreting the quotient)
- Determine the least common multiple of two numbers to find the least common denominator
- Determine the sum or difference of two fractions and simplify the resulting fraction
- Solve problems involving multiplication of a whole number, limited to 12 or less, and a proper fraction using a model
- Solve problems involving the addition, subtraction, multiplication, and division of decimals
- Use order of operations to simplify numerical expressions
- Solve problems, including word problems, that involve length, mass, and liquid volume using metric units
- Solve problems , including word problems, involving perimeter, area, and volume
- Classify, measure, and solve problems involving angles and triangles
- Apply the data cycle (formulate questions, collect data, organize and represent data, and analyze and communicate results) with a focus on line plots and stem-and-leaf plots
- Describe and determine mean, median, mode, and range of a set of data
- Determine the probability of an outcome using models and the Fundamental Counting Principle



There are 18 total combinations

- Identify, describe, extend, and create increasing and decreasing patterns with whole numbers, fractions, and decimals
- Investigate and use variables (e.g, y+5 or x-6)