



Mathematics - Grade 1

2022 - 23

Students working at grade level expectations will achieve the following learning objectives:

Number
Read, write and model numbers up to 30
Illustrate numbers by using number rays
Understand place value up to 30: tens and units (or ones)
Understand the difference between digit and number
Count in numbers to 100 in steps of 10
Fluency with fact families up to 10 ($3+5=8$, $5+3=8$, $8-3=5$, $8-5=3$)
Fluency with number bonds up to 10 with addition and subtraction ($3+6=9$, $4+5=9$, $7+2=9$...)
Calculate number bonds up to 20 with addition and subtraction ($9+4=13$, $8+5=13$, $6+7=13$)
Count (1s, 2s, 5s, and 10s), compare, and order numbers to 30
Use symbols: $<$, $>$, $=$, \neq when comparing numbers to 30
Use mathematical vocabulary and symbols of addition and subtraction: add, subtract, $+$, $-$ (difference and sum for advanced)
Read, write and model addition and subtraction to 30 without crossing the tens boundary
Read, write and model addition and subtraction to 20 with crossing the tens boundary
Automatically recall addition and subtraction facts to 10
Describe the meaning and use of addition and subtraction
Explore and model multiplication and division using their own language/methods ("grouping" and "sharing")

Use fraction names (whole and half) to describe part and whole relationships (connected with telling the time)
Estimate the reasonableness of answers
Select and explain the appropriate method for solving a problem
Related additions and subtractions with a ten ($4 + 3 = 7$, $14 + 3 = 17$, $24 + 3 = 27$)
Ordinal numbers (1 st , 2 nd , 3 rd , first, second, third, etc.)
Real-life word problems using basic calculations – one step
Patterns and Functions
Create, describe and extend patterns without numbers -(logical thinking)
Recognize, describe, and extend patterns in numbers: odd and even, skip counting, 2s, 5s, and 10s
Identify patterns and rules for addition: $4 + 3 = 7$, $3 + 4 = 7$ (communicative property)
Identify patterns and rules for subtraction: $7 - 3 = 4$, $7 - 4 = 3$
Model, with manipulatives, the relationship between addition and subtraction: $3 + 4 = 7$, $7 - 3 = 4$
Understand and use number patterns to solve problems (missing numbers)
Double and halve numbers up to 20 $6 + 6 = 12$, $4 = 2+2$, $10+10 = 20$, etc.
Solve real-life word problems with patterns – one step
Measurement
Estimate, measure, label and compare using non-standard units of measurement: length, mass, and time
Understand why we use standard units of measurement to measure
Use a calendar to determine the date, and to identify and sequence days of the week and months of the year
Estimate, identify and compare lengths of time: hour, day, week, month and year
Read and write the time to the hour and half hour
Reading, writing and counting Euros and cents
Using a ruler for measuring length with centimeters
Comparing weight: heavier and lighter
Real-life word problems with measurement – one step

Shape and Space
Sort, describe and compare 2-D shapes according to attributes such as size, form, or color
Sort and label 2-D shapes using appropriate mathematical vocabulary: sides, corners, circle, square, etc.
Create 2 – D shapes
Find and explain symmetry in their immediate environment
Create and explain simple directions, describing paths, regions, and boundaries of their immediate environment and their position: left, right, forward, and backward, up, down
Solve real-life word problems with shape and space – one step (blue-bot)
Data Handling
Sort and label objects by one or more attributes
Discuss and compare data represented in teacher – generated diagrams: Venn diagram, bar graph, pictograph
Collect, display, and interpret data for the purpose of finding information
Understand the purpose of graphing data
Create a pictograph and simple bar graph from a graph of real objects, and interpret data by comparing quantities: more, fewer, less than, greater than
Discuss and become familiar with the vocabulary of probability: impossible, unlikely, likely, and certain
Real-life word problems with data handling – one step