Mathematics - Grade 3
2022 - 23

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

Number
Number Review from Grade 2 – up to 100 : read, write, and model numbers and review place value and rounding up to 100
Read, write, and model numbers, using the base 10 system, to 1,000
Count, compare and order numbers to 1,000
Estimate quantities to 1,000
Review and automatically recall multiplication tables up to 10 x 10 and division fact table up to 100
Automatically recall basic addition and subtraction facts
Model addition and subtraction equations to 1,000 (with and without regrouping, first horizontally, then vertically with carrying and borrowing)
Use mathematical vocabulary and symbols of multiplication and division: multiply, divide, product, quotient, x, :
Use and describe multiple strategies to solve addition, subtraction, multiplication and division problem
Read, write and model multiplication problems up to 3 – digit times 1 – digit numbers
Read, write and model division problems up to 1 – digit into 3 – digit numbers with and without remainders
Reasonably estimate answers: rounding and approximation
Select and explain an appropriate method for solving a problem
Introduce the Roman Numerals: I, V, X, L, C, D, M
Basic introduction to fractions with ½ and ¼ to help with telling the time and other measurements

Solve real-life word problems using each of the basic operations up to 1,000 - up to three steps for advanced
Pattern and Functions
Analyze patterns in number systems up to 1,000
Recognize, describe and extend more complex patterns in numbers
Identify patterns and rules for multiplication and division: 4 x 3 = 12, 3 x 4 = 12, 12 : 3 = 4, 12 : 4 = 3
Solve real-life word problems using pattern and functions up to 1,000 - up to three steps
Model with manipulatives the relationship between multiplication, addition, subtraction and division.
Measurement
Estimate, measure, label and compare using formal methods and standard units of measurement: length, mass, time, temperature, and volume
Select appropriate tools and units of measurement
Describe measures that fall between numbers on a measuring scale: 3 ½ kg, between 4 cm and 5 cm
Estimate, measure, label and compare perimeter
Model addition and subtraction using money
Converting money (Euro to Cent with cents always shown using a decimal point)
Comparing two or three amounts of money
Read and write the time using intervals as small as 1 minute, on 12-hour clocks (full hour, half past, quarter past, quarter to, analogue clocks)
Measurement length: km, m, cm, mm; explain dm
Measurement length: Convert mm to cm and dm to m
Measurement weight: kg, dag, g
Measurement weight: Convert g to dag and dag to kg, explain tons
Measurement volume: mL, L
Measurement time: Convert years to days, hours to minutes
Elapsed time: full and half hour
Solve real-life (2- step) word problems with all kinds of measurement (3 steps for advanced)

Shape and Space
Sort, describe and model regular and irregular polygons: triangles, hexagons, trapezoids
Create symmetrical patterns, including tessellation
Identify lines and axes of reflective symmetry
Understand an angle as a measure of rotation by comparing and describing rotations and directions: whole turn, half turn, north, south, east, and west on a compass rose (SW, NE, NW, SE for advanced)
Locate features on a grid using coordinates
Identify, describe, and sort 3-D shapes according to their properties: (faces, edges and vertices) for sphere, cube, cuboid, pyramid, cone, cylinder (triangular prism and hemisphere for advanced) Note: a “face” can be classified as flat or curved. For example: a cone has one flat face, one curved face, one edge, and one vertex
Solve real-life word problems using “shape and space” - up to three steps for advanced
Data Handling
Discuss, compare and interpret sets from data that has subsets using Venn and other diagrams
Design a survey, process and interpret the data
Collect and display data in a bar graph and interpret results
Use the scale on the vertical axis of a bar graph to represent large quantities
Use probability to determine mathematically fair and unfair games and to explain possible outcomes
Solve real-life word problems using data handling - up to three steps for more able students.