

Mathematics Educational Area

Mathematics

Year 1-2

3* or 4 hours per week, 105 or 140 hours per year
(* one hour is added to the study of the integrated subject
"I'm exploring the world")

Proposed content

1.	<p>"Calculation" "Numbers. Calculation. Operations with numbers" meaningful line</p> <p>Natural numbers 1-10. Indication of a number by a digit. Figure 0. Numeric line. Numbers 11-100. Positional record of the number. Comparison of numbers, use of signs $<$, $>$, $=$. Comparison and arrangement of world objects with common features (color, size, shape), etc. Calculation according to the rules of world objects within 100. Ordinal number. Calculation is in the forward and reverse order. Counting units by two, five, ten. Checking the correctness of the calculation in a convenient way. Arithmetic operations of addition and subtraction. Finding unknown components of addition and subtraction actions. Permutable law of addition. Addition and subtraction of numbers within 100. Methods of performing arithmetic operations of addition and subtraction. Arithmetic operations of multiplication and division. Finding unknown components of multiplication and division. Correlation between multiplication and division. Permutable law of multiplication. Whole, parts of the whole. Differential and multiple comparison. Mathematical expression and its meaning. The order of actions in mathematical expressions for 1-2 actions. Expressions with a variable for 1-2 actions. Numerical equalities and inequalities. Solve plot problems with mathematical methods based on simple mathematical models. Errors in calculations and ways to detect them.</p>
2.	<p>"Measurement of values" content line</p> <p>Measurement of values (length, mass, temperature, time, capacity (volume) using improvised means and measuring instruments. Units of measurement and the relationship between them. Measuring the length of segments. Construction of segments of a given length. Determining the time on the clock. Calendar and its use to describe and solve everyday problems. Measurement of capacity (volume) using a liter (or other) measure. Comparison of objects around the world in length, mass, volume. The expediency of using units of measurement in specific cases. Money. Operations with money.</p>

	Concrete numbers. Transition from one measurement unit to another. Comparison, addition and subtraction of concrete numbers. Solve problem situations in your life that involve measuring and transforming values.
3.	"Spatial relationships. Geometrical figures" content line. Placement of objects on the plane and in the space. Geometric shapes: point, line, curve, ray, segment, broken line, angle, circle, their features. Modeling of geometric shapes from improvised material (laces, pencils, sticks, etc.). Geometric planar figures: triangle, quadrilateral (rectangle, square), pentagon, hexagon, circle, their signs and properties. Construct a rectangle/square on a sheet of paper in a cell. Geometric three-dimensional shapes: cube, pyramid, sphere, cone, cylinder, their features. Recognize familiar geometric planar and three-dimensional shapes among objects environment, in the pictures. Designing familiar planar and three-dimensional geometric shapes from improvised material. Create layouts of real and imagined objects.
4.	"Working with data" content line Gathering, streamlining, comparison, grouping of data. Read data from tables, icons, schemes. Perform simple tasks based on collected (presented) data using simple models.

Compulsory learning outcomes of applicants for education (recording with the State standard of primary education).

Student:

- recognizes from situations of their own life the ones that require the enumeration of objects, measuring quantities, calculating;
- analyses the problem situations of their life; defines a group of related quantities to daily life mathematical problems of mathematical content;
- predicts the result of arithmetic operations;
- converts information (heard, seen, read) into a diagram, table, schematic drawing;
- selects a sequence of actions to solve the problem situation;
- selects the numerical data necessary and sufficient to answer a specific question;
- determines the action (s) to solve the problem situation, performs it (them);
- determines whether the data are sufficient to solve the problem;
- defines ways to solve the problem situation;
- matches the result gained with the predicted result;
- verifies the correctness of the result of the arithmetic operation; detects and corrects errors;
- defines essential, general and distinctive features of objects of the world; compares, unites and distributes into groups based on common features;
- counts objects, indicates the number of the result of the count; compares the numbers within a hundred and puts them in order;
- calculates orally in a convenient way in academic and practical situations;
- orients on a plane and in space; describes or depicts schematically the placement, direction and movement of objects;

Educational programs in use for teaching Ukrainian children



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- recognizes familiar geometric plane and three-dimensional shapes among the objects of the world, in the figures;
- constructs planar and three-dimensional shapes from alternate materials, creates layouts of real and imaginary objects;
- measures values with the help of available tools and measuring instruments;
- identifies relationship between the components and the result of an arithmetic operations.