

Grade 4 Mathematics: Year at a Glance

Overview

This year, your child works with numbers into the thousands, decimals, fractions, and percentages, learning how each one describes a quantity in its own way. They explore equality and see how equations show relationships between amounts. They study shapes and their properties, and they measure area and angles using standard units. Patterns and sequences help them notice change and solve problems. They learn to tell and use time with standard units, and they work with graphs, thinking about how the way data is shown affects what it communicates. [See the curriculum: 1, 2, 3, 4, 5, 6, 7.](#)

The year at a glance

Grade 4

Organizing idea	Guiding questions	Learning outcomes
Number: Quantity is measured with numbers that enable counting, labelling, comparing, and operating.	How can place value facilitate interpretation of number?; How can understanding of addition and subtraction be extended to decimal numbers?; How can multiplication and division characterize the composition of numbers?; How can multiplication and division be interpreted?; How can fractions be characterized in different ways?; How can percentages standardize part-whole relationships?	Students apply place value to decimal numbers. (see the curriculum); Students add and subtract within 10 000, including decimal numbers to hundredths. (see the curriculum); Students explain properties of prime and composite numbers, using multiplication and division. (see the curriculum); Students multiply and divide natural numbers within 10 000. (see the curriculum); Students apply equivalence to the interpretation of fractions. (see the curriculum); Students interpret percentages. (see the curriculum)
Algebra: Equations express relationships between quantities.	How can equality create opportunities to reimagine number?	Students represent and apply equality in multiple ways. (see the curriculum)
Geometry: Shapes are defined and related by geometric attributes.	In what ways can geometric properties define space?	Students analyze and explain geometric properties. (see the curriculum)
Measurement: Attributes such as length, area, volume, and angle are quantified by measurement.	How can area characterize space?; In what ways can angles be described?	Students interpret and express area. (see the curriculum); Students determine and express angles, using standard units. (see the curriculum)
Patterns: Awareness of patterns supports problem solving in various situations.	How can sequences provide insight into change?	Students interpret and explain arithmetic and geometric sequences. (see the curriculum)
Time: Duration is described and quantified by time.	What might be the relevance of duration to daily living?	Students communicate duration with standard units of time. (see the curriculum)
Statistics: The science of collecting, analyzing, visualizing, and interpreting data can inform understanding and decision making.	In what ways can communication be shaped by the choice of representation?	Students evaluate the use of scale in graphical representations of data. (see the curriculum)

Across the year

- Place value threads through the number work all year, from whole numbers into the thousands to decimals and percentages, so your child keeps using the same idea of position and value in new contexts. [See the curriculum: 1, 2, 3, 4.](#)
- Multiplication and division come up in more than one place: as tools for understanding how numbers are built from primes and composites, and as operations your child performs directly with larger numbers. [See the curriculum: 1, 2, 3, 4.](#)
- Geometry and measurement connect closely, since shapes are described by their properties while area and angles give those same shapes numbers to work with. [See the curriculum: 1, 2, 3, 4, 5.](#)
- Patterns and equality both ask your child to look for structure, whether that means spotting how a sequence changes or showing the same amount in different ways. [See the curriculum: 1, 2, 3, 4.](#)
- Time and statistics both rely on standard units and clear representation, whether your child is measuring how long something takes or choosing a scale that fairly shows data on a graph. [See the curriculum: 1, 2, 3, 4.](#)