

# Mathematics

## Draft K-6 curriculum

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### Mathematics overview

Mathematics is a powerful tool used every day to solve real-life problems. It includes arithmetic, geometry, data, statistics, and probability. Through mathematics, students learn critical thinking skills to analyze information and make decisions in a variety of situations. For example, they rely on mathematics to tell time, manage a budget, change a recipe, play a board game, build a Lego® model, or make a schedule.

Studying and mastering mathematics can lead to jobs in computer science, construction, artificial intelligence, teaching, engineering, and many other fields.

### Shifts in K-6 mathematics

These are the main shifts in knowledge and skill requirements from the current K-6 mathematics curriculum to the draft:

#### Spatial reasoning

- Current – Limited focus on spatial reasoning in earlier grades.
- Draft – More focus on spatial reasoning at earlier grades to help students understand number and geometry concepts at a younger age.

#### Fractions

- Current – Students start learning fractions in Grade 3.
- Draft – Students learn fractions in Grade 1 to build a strong foundation for understanding proportions.

#### Number facts

- Current – Expectations for students to recall number facts.

- Draft – Expectations for students to learn, recall, and apply number facts so they can add, subtract, multiply, and divide more efficiently in various situations.

#### Operations

- Current – Students do not have to use a particular method to add, subtract, multiply, or divide.
- Draft – Clear expectations for students to use standard algorithms to add, subtract, multiply, or divide so there are consistent, reliable processes to find answers.
- Current – Students are expected to add, subtract, multiply, and divide with whole numbers and decimals.
- Draft – Students are expected to add, subtract, multiply, and divide with whole numbers, decimals, fractions, and negative numbers to build a strong foundation for later grades.

#### Financial literacy

- Current – Students are not required to learn about money and financial concepts.
- Draft – Students learn money basics using mathematics to develop financial literacy skills.

### Draft K-6 mathematics snapshot

In mathematics, students will learn about numbers and operations, geometry, and measurement of length, area, volume, and time.

#### Kindergarten

- Count and represent quantities within 10.
- Recognize 2-D and 3-D shapes in the environment.
- Compare objects by length, area, mass, and capacity.
- Order a sequence of events according to time.

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## Grade 1

- Recall addition number facts to a sum of 20 and related subtraction facts.
- Compare and sort 2-D and 3-D shapes.
- Order objects according to length.
- Identify cycles of time from nature and calendars.

## Grade 2

- Add and subtract numbers within 100.
- Use angles or sides to sort shapes and describe the sorting rule.
- Measure length in centimetres.
- Describe durations of time in days, weeks, months, or years.

## Grade 3

- Add and subtract numbers within 1,000 using standard procedures (algorithms).
- Recognize parallel, perpendicular, and equal sides in 2-D shapes.
- Convert between metric and imperial units.
- Tell time using analog and digital clocks.
- Multiply and divide within 100.

## Grade 4

- Add and subtract numbers within 10,000, including decimal numbers, using standard procedures (algorithms).
- Classify quadrilaterals and triangles using angle and side measurements.
- Measure and calculate area.
- Calculate elapsed time.
- Multiply and divide three-digit natural numbers by one-digit natural numbers.

## Grade 5

- Add and subtract numbers within 1,000,000, including decimal numbers, using standard procedures (algorithms).
- Classify shapes using symmetry.
- Calculate area and perimeter of rectangles.
- Multiply fractions by whole numbers.

## Grade 6

- Add, subtract, multiply, and divide using standard procedures (algorithms) to solve problems.
- Recognize identical shape and size (congruency).
- Calculate volume of prisms.

- Multiply and divide fractions.
- Determine the value of money.
- Count coins and bills.
- Practise financial transactions.
- Measure height, width, depth, area, volume, and time.
- Use fractions in real-life situations, such as cooking and construction.
- Recognize number patterns.

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