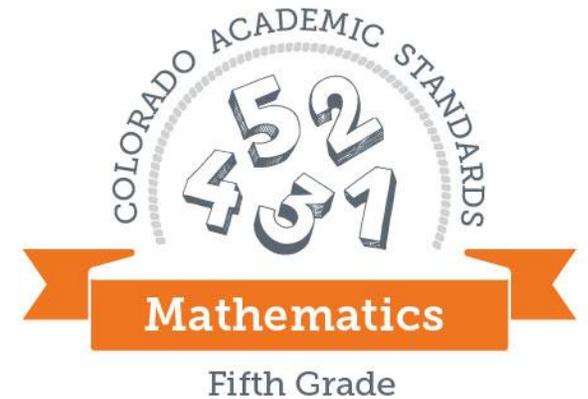


A Guide to the Colorado Academic Standards



Working Together

To support families and teachers in realizing the goals of the Colorado Academic Standards, this guide provides an overview of the learning expectations for Mathematics from the standards for Fifth Grade and offers some possible learning experiences your child may engage in during this school year.

Why Standards?

Created by Coloradans for Colorado students, the Colorado Academic Standard provide a grade-by-grade road map designed to help ensure students are ultimately successful in college, careers, and life. The standards aim to improve what students learn and how they learn in ten content areas, emphasizing critical-thinking, creativity, problem solving, collaboration, and communication as important life skills in the 21st century.

Mathematics for Elementary Schools (k-5)

The mathematics standards in the elementary years focus on developing students' understanding of number and those concepts from geometry that strengthen students' ability to visualize number. In each grade students are asked to make sense of problems, explain their thinking, and show their world using mathematics.

Where can I learn more?

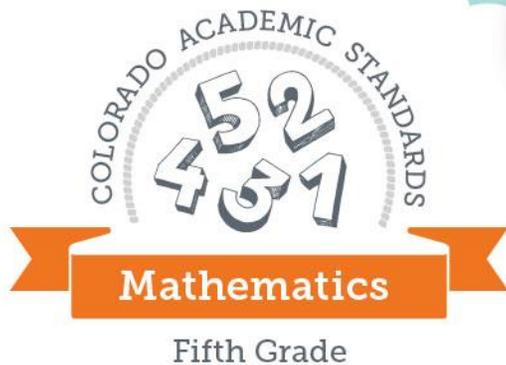
- Contact your school district regarding local decisions related to standards, curriculum, resources, and instruction.
- Colorado Academic Standards Booklets: <http://www.cde.state.co.us/standardsandinstruction/GradeLevelBooks.asp>
- Mary Pittman, Mathematics Content Specialist at 303-854-4560, Pittman_m@cde.state.co.us



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At the end of
Fifth Grade,
students can...



Mathematics Learning Expectations for Fifth Grade

Number

Fluently (consistently) multiply multi-digit whole numbers; extend the idea of place value to decimals; begin to divide using multi-digit divisors (fluency occurs in sixth grade); multiply fractions; add and subtract fractions by creating equivalent fractions ($\frac{1}{2}$ is the same as $\frac{2}{4}$); understand the relationship between fractions and division ($\frac{2}{5}$ means $2 \div 5$); solve simple word problems involving division of fractions with pictures (formal procedure is taught in sixth grade).

Geometry and Measurement

Find the volumes of rectangular prisms through multiplication; convert within the metric system; graph points on a grid using positive numbers.

Throughout the Fifth Grade, you may find students...

- Exploring patterns (using a calculator) that occur when multiplying by powers of ten (10, 100, $\frac{1}{10}$, $\frac{1}{100}$).
- Making connections between whole numbers and decimals; playing with money to explore how to add and subtract numbers involving decimals.
- Solving fair share problems (3 submarine sandwiches fairly shared among 4 people) to explore the relationship between fractions and division.
- Drawing pictures to solve simple word problems involving the division of fractions (“How many $\frac{1}{3}$ cups can someone make from $2\frac{1}{2}$ cups of flour?”).
- Filling boxes with cubes to explore the concept of volume and its connection to area; exploring how to find the volume of objects that can be broken into several rectangular boxes.
- Playing games involving coordinates-location on a grid (“Battleship”).