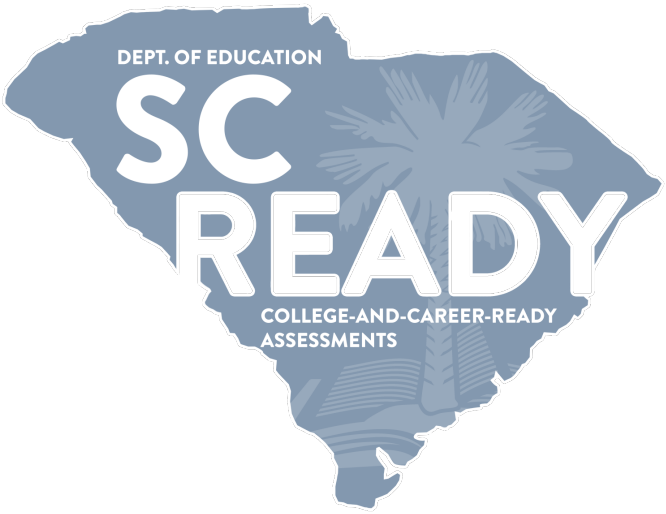
SOUTH CAROLINA
DEPARTMENT OF EDUCATION



SC READY Mathematics Grades 3-5
2025 Data Review Report

Office of Assessment and Standards

Updated October 2025

South Carolina Department of Education

Contents

Introduction

Data Recognition Corporation and the South Carolina Department of Education Office of Assessment and Standards (OAS) convened a panel of content experts to review item data from the Spring 2025 administration of SC READY. The panel of content experts analyzed operational and field test items, including information about how students performed on each item. Based on their analyses, the panel offered the instructional insights and strategies outlined in this document to support student learning.

Operational items on the Spring 2025 SC READY Math assessment were aligned to the 2015 Math Standards. To be most useful for teachers, all instructional insights and strategies in this document, including those from the analysis of operational items, have been organized based on their alignment to the 2025 South Carolina College-and Career-Ready (SC CCR) Math Standards.

The OAS recognizes the hard work of the panel and South Carolina educators, and offers these relevant and useful suggestions for improving instruction as an addendum to those from previous years.

General Insights

Over the course of the panel's item analyses and subsequent conversations, general instructional insights common across Grades 3-5 began to emerge. These insights are listed in this section.

- General Insight #1: Introduce students to a range of representations or models.
- General Insight #2: Explicitly teach and consistently reinforce mathematical vocabulary. Students benefit from regular opportunities to use, hear, and read consistent mathematical terms and phrases.
- General Insight #3: Develop strategies to help students organize their thinking when solving real-world and multi-step problems.
- General Insight #4: Make ongoing connections to multiplication and division throughout the school year.
- General Insight #5: Review measurement and geometry concepts consistently throughout the school year, as opposed to teaching them in isolated units.

Third Grade

Insights and Strategies Aligned to 3rd Grade DPSR

- Ensure students practice noticing errors in various graphs and explain their thinking.
- Have students match sets of data to their respective graphs.

Insights and Strategies Aligned to 3rd Grade MGSR

- Use open number lines to teach the concept of time.
- Incorporate real-world examples to help students identify angles.
- Present angles in various orientations.
- Demonstrate how to use the corner of notebook paper to identify right angles.
- Ensure students clearly understand the meaning of "opposite sides parallel" when identifying line relationships in polygons (prior to the 2025 SC CCR Math Standards, this strategy aligned to a 4th-grade indicator).
- Use the terms "set of parallel lines" and "pair of parallel lines" interchangeably (prior to the 2025 SC CCR Math Standards, this strategy aligned to a 4th-grade indicator).

Insights and Strategies Aligned to 3rd Grade NR

- Ensure students have a solid understanding of place value when comparing numbers.
- Emphasize conceptual understanding of benchmark numbers when rounding on a number line, rather than relying on shortcuts or tricks.
- Explore patterns in denominators when representing fractions on a number line.
- Provide opportunities for students to use fraction bars to deepen their understanding of fractions on a number line.
- Encourage students to highlight the whole numbers to support comprehension when working with fractions greater than one on a number line.

Insights and Strategies Aligned to 3rd Grade PAFR

- Use numberless word problems to help students focus on determining the appropriate operation before solving.
- Avoid introducing the standard algorithm too early when teaching addition and subtraction. Instead, expose students to a variety of strategies to build conceptual understanding.
- Help students see word problems as stories to improve comprehension of and connect with the context.
- Provide opportunities for students to identify factors within real-world multiplication problems.

- Offer a range of real-world division problems where the dividend does not always appear first in order to build flexibility in problem-solving.
- Practice identifying the dividend and divisor in real-world contexts to strengthen understanding.

Fourth Grade

Insights and Strategies Aligned to 4th Grade DPSR

- Provide opportunities for students to analyze and explain errors in various types of graphs. Go beyond collecting data and creating the graph.
- Engage students in sorting data sets, numerical vs. categorical, and matching them to the appropriate types of graphs to deepen their understanding of data representation.

Insights and Strategies Aligned to 4th Grade MGSR

- Use open number lines to help students calculate the total value of money.
- Ensure students can identify the names and values of coins and bills, not just their visual appearance.
- Teach time using open number lines to support conceptual understanding.
- Highlight and color-code the attributes of polygons to make geometric concepts more accessible.
- Provide exposure to irregular quadrilaterals (prior to the 2025 SC CCR Math Standards, this strategy aligned to a 3rd-grade indicator).
- Practice sorting quadrilaterals using Venn diagrams to explore their shared and distinct properties. (prior to the 2025 SC CCR Math Standards, this strategy aligned to a 3rd-grade indicator).
- Practice identifying the multiple names in the hierarchy that apply to a given quadrilateral (prior to the 2025 SC CCR Math Standards, this strategy aligned to a 3rd-grade indicator).

Insights and Strategies Aligned to 4th Grade NR

- Discuss the reasonableness of a quotient or product when estimating solutions to real-world problems.
- Provide opportunities for students to explore and apply different strategies when working with fractions.
- Encourage students to draw their own fraction models, rather than only viewing teacher-created examples.
- Offer opportunities to partition shapes in various ways when working with fraction models to deepen understanding.
- Use paper folding activities to represent fractions and help students make connections to multiplication concepts.

Insights and Strategies Aligned to 4th Grade PAFR

- Ensure students work with a variety of real-world math problems where numbers and operations like factors, divisors, dividends, products, or quotients are presented in different arrangements.
- Discuss with students which operation is being performed in a real-world problem and have them justify their reasoning.
- Discuss how to interpret the remainder in a context when working with division problems.
- Encourage students to always draw a model of the problem, especially when working with fractions.
- Teach students to identify factor pairs in an organized and systematic way.

Fifth Grade

Insights and Strategies Aligned to 5th Grade DPSR

- Focus on vocabulary when finding mode and range. Use visuals to make connections when identifying mode and range (prior to the 2025 SC CCR Math Standards, this strategy aligned to a 6th-grade indicator).
- Create data sets using your classroom and students when analyzing data displays to make deeper connections.

Insights and Strategies Aligned to 5th Grade MGSR

- Use hands-on manipulatives to teach volume in the classroom.
- Provide opportunities for students to explore prisms in paper form to help them visualize the "unseen parts" of the shape.
- Make connections to area when finding the volume of a prism.
- Encourage reasoning skills when converting measurements, helping students understand each type of measurement.
- Incorporate place value language, such as "10 times" or "1/10 times," during measurement conversions to reinforce understanding.
- Ensure students are familiar with the vocabulary related to the coordinate plane.
- Discuss the difference between vertical and horizontal distances on the coordinate plane.
- When converting, sort measurements of length, weight, liquid volume, and time from smallest to largest and largest to smallest (prior to the 2025 SC CCR Math Standards, this strategy aligned to a 4th-grade indicator).

Insights and Strategies Aligned to 5th Grade NR

- Practice writing numbers in expanded form with expressions presented out of order.
- Use a vertical number line to support rounding numbers.

Insights and Strategies Aligned to 5th Grade PAFR

- Discuss with students how to contextualize the situation when solving real-world problems.
- Encourage students to put themselves in the problem's context to build stronger connections to the operation being performed.
- Ensure students draw a model when working with fractions to better identify the operation involved.
- Include activities where students identify errors in expressions and justify their reasoning.
- Use multiple strategies for teaching GCF, LCM, and prime factorization. Focus on academic vocabulary such as factor and multiple. (prior to the 2025 SC CCR Math Standards, this strategy aligned to a 6th-grade indicator).

- Help students develop fluency with prime numbers to simplify the process of breaking numbers into prime factors. (prior to the 2025 SC CCR Math Standards, this strategy aligned to a 6th-grade indicator).