

Suffield Public Schools

Grade 5 Math- Term 2

Report Card Companion Document



Math

Students today are preparing to enter into a 21st century workforce that looks vastly different than what we have ever known. Gone are the days of memorizing formulas and carrying out lock step procedures. Instead, there is a critical need for students to **understand** the mathematical foundations that explain why and how concepts work. With a focus on developing number sense and critical thinking, the Common Core Standards in Mathematics stresses conceptual understanding of key ideas where students need to be able to reason mathematically and communicate their reasoning effectively to others. The development of solid conceptual understanding, a high degree of procedural skill and fluency, and the ability to apply the math they know to solve problems inside and outside the math classroom has broadened what it means to be able to do and learn math. **The following guide will help you gain a better sense of what each of the Common Core Standards requires students to achieve.**



Grade 5 Math End of Term 2 Standards' Expectations

The first 3 math objectives are standards for mathematical practice - how your child approaches problems and communicates her/his mathematical reasoning. Throughout the year, your child will continue to develop these dispositions as they deepen their understanding of mathematical concepts and refine their approaches to problems.

Math Practice 1- Make sense of problems and persevere in solving them: Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?"

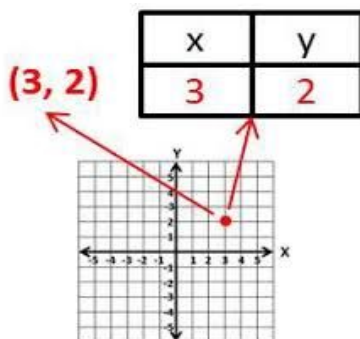
Math Practice 3- Construct viable arguments and critique the reasoning of others: Mathematically proficient students justify their conclusions with evidence, communicate them to others, and respond to the arguments of others. Mathematically proficient students can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Math Practice 6- Communicates reasoning using clear and precise language, vocabulary, and notation: Mathematically proficient students try to communicate precisely to others by: using clear definitions, stating the meaning of symbols they choose, specifying units of measure and labeling accurately. Mathematically proficient students calculate accurately and efficiently and appropriately express numerical answers.

Operations and Algebraic Thinking

Writes and interprets mathematical expressions - Mathematically proficient students write and solve problems using order of operations including the use of parentheses. Students write simple expressions that record their calculations, and interpret the meaning of numerical expressions without solving them.

Analyzes patterns and relationships- Mathematically proficient students use tables and graphs to identify relationships between patterns and generate numerical patterns using given rules. They form ordered pairs from patterns and graphs the sequences on a coordinate plane.



Numbers and Operations in Base Ten

Understands the place value system - Mathematically proficient students recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left. Students solve multiplication problems using factors with multiples of 10. Ex. $40 \times 700 = 28,000$.

Mathematically proficient students write and explain the value of numbers in expanded form.



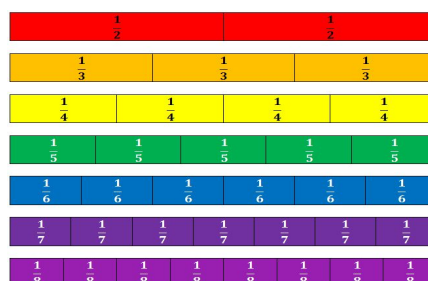
Performs operations with multi-digit whole numbers and with decimals to hundredths - Mathematically proficient students fluently solve multi-digit multiplication problems using known strategies as well as the standard algorithm. Students use known strategies to solve division problems with up to 4-digit dividends and 2-digit divisors, both with and without remainders.

Demonstrates fluency with basic multiplication and division fact combinations to 10×10 and $100/10$ - Mathematically proficient students multiply combinations up to 10×10 accurately and efficiently, within 3-5 seconds. They use mental strategies to solve division facts within 100.

Fractions

Uses equivalent fractions as a strategy to add and subtract fractions- Mathematically proficient students add and subtract fractions with unlike denominators by replacing given fractions with equivalent fractions.

They solve word problems involving addition and subtraction of fractions with like and unlike denominators. Mathematically proficient students estimate mentally and assess the reasonableness of their answers.



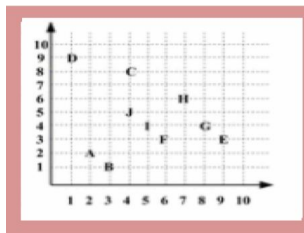
Measurement and Data

Represents and interprets data- Mathematically proficient students make line plots to display a data set of measurements in fractions of a unit that include $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{8}$. They use addition and subtraction with fractions to solve problems involving information presented on line plots.

Understands concepts of volume and relates volume to multiplication and addition - Mathematically proficient students recognize volume as an attribute of solid figures and measures volume by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units. Students move from generating individual strategies to determine the volume of rectangular prisms to the application of the formulas $V = l \times w \times h$ and $V = b \times h$. Students apply their understanding of volume to make combinations of joined prisms and solve real world.

Geometry

Graphs points on the coordinate plane to solve real-world and mathematical problems- Mathematically proficient students understand and apply the convention that the names of the two axes and the coordinates correspond. They represent real world and mathematical problems by graphing points in the 1st quadrant of the coordinate plane. They are able to interpret coordinate values of points in the context of the situation.



How can you support your child?

General Math Support

- Ask questions to support your child with their homework:
 - o What do you already know about this problem?
 - o Can you draw a picture of what is happening?
 - o Does this remind you of a problem you have seen before?
 - o How did you solve this problem?
 - o How can you check your work?

-Show that you have a growth mindset about math. Even if you struggle with math or don't have a clear understanding of a math concept, show your child you are excited to learn along with them.

-Make math fun and engaging for your child. Bring math into as many real world situations as possible. (ex. grocery shopping, baking, telling time, etc)

- Offer manipulatives for your child to use at home to make concepts more concrete (exs. cereal, beans, pennies, blocks)

- Read the Family Letter for each unit to become familiar with the math concepts being introduced and what you can do to help. Letters are posted on the district website.

Additional Resources:

- [Investigations Grade 5](#)
- [Common Core State Standards for mathematics](#)
- [Helping your child learn mathematics, activities for grades PreK-5](#)