

# Suffield Public Schools

## Grade 5 Math

### 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 1 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?"

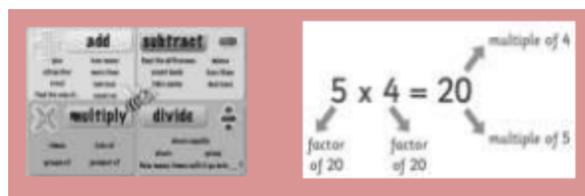
**Math Practice 3- Construct viable arguments and critique the reasoning of others:** Mathematically proficient students justify their conclusions with evidence, communicate them to others, and respond to the arguments of others. Mathematically proficient students can listen or read the arguments of 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

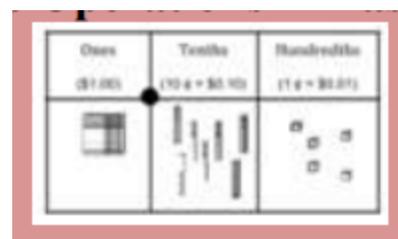
#### **Writes and interprets mathematical expressions**

- 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.



### 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  $1/10$  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 solve 2 digit by 2 digit multiplication and 3 digit dividend by 1 and 2 digit divisor division problems accurately and efficiently. Mathematically proficient students use strategies based on place value, the properties of operations, and/or the relationship between multiplication and division to solve. Students illustrate and explain their calculations by using equations, rectangular arrays, and/or area models. Students make sense of a remainder in the context of a problem.

**Demonstrates fluency with basic multiplication and division fact combinations to 10x10 and 100/10-** Mathematically proficient students multiply combinations up to 10x10 accurately and efficiently. Students solve problems within 3-5 seconds to demonstrate automaticity.

**Important Note:**

If your child receives a score of a 4 on their report card—they are able to pass mixed operation assessments.

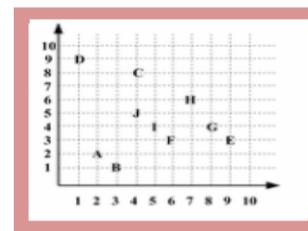
If your child receives a score of a 3 on their report card— they are able to pass each operation (addition, subtraction, multiplication, and division) in isolation.

If your child receives a score of a 2 on their report card—they are currently working in multiplication and/or division.

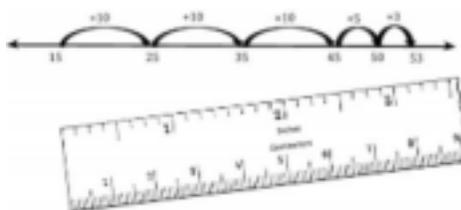
If your child receives a score of a 1 on their report card—they are currently working in addition and/or subtraction.

### Measurement and Data

**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.



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

-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)

- 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](#)