

# Suffield Public Schools

## Grade 4 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 4 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?"

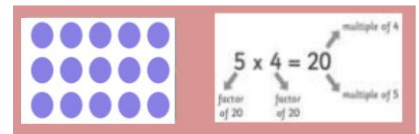
**Math Practice 3- Construct viable arguments and critique the reasoning of others:** Mathematically proficient students justify their conclusions with evidence, communicate them to others, and respond to the arguments of others. Mathematically proficient students can listen or read the arguments of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

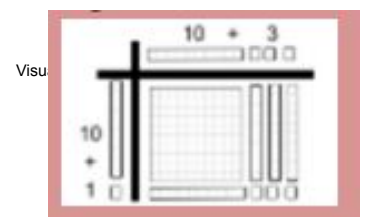
**Uses the four operations with whole numbers to solve problems -**

Mathematically proficient students interpret multiplication equations as a comparison e.g.  $35 = 5 \times 7$  as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Students represent verbal statements of multiplicative comparison as multiplication equations. Mathematically proficient students also develop and share strategies for finding a product represented by an array.



**Gains familiarity with factors and multiples-** Mathematically proficient students determine whether numbers up to 100 are prime, square, or composite. They can find all factors of numbers up to 100 and recognize multiples of 1-digit numbers.

### Numbers and Operations in Base Ten



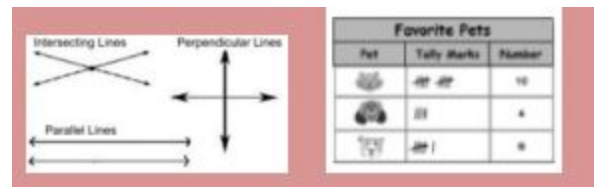
**Uses place value understanding and properties of operations to perform multi-digit arithmetic-** Mathematically proficient students generalize place value understanding for multi-digit whole numbers. They are able to read and write multi-digit whole numbers using base ten numerals and word form as well as compose and decompose numbers using expanded form. Students are able to compare and record the results using  $<$ ,  $>$ ,  $=$ .



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

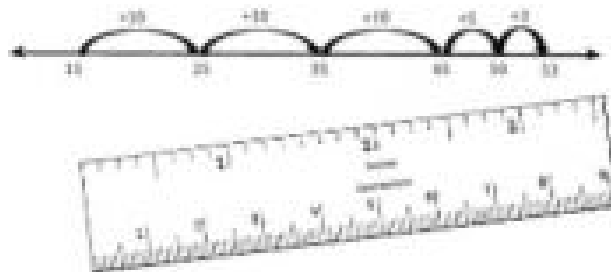
### Measurement and Data

**Solves problems involving measurement and conversion of measurement-** Mathematically proficient students accurately estimate and measure to the nearest whole and half unit.

**Represents and interprets data-** Mathematically proficient students design data questions that involve measurement to compare two groups. They organize and represent data on line plots and are able to analyze and draw conclusions about their data.



Pet	Tally Marks	Number
		4
		4
Total		8



## 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 (ex. 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 4](#)
- [Common Core State Standards for mathematics](#)
- [Helping your child learn mathematics, activities for grades PreK-5](#)