

Suffield Public Schools

Grade 3 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 3 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

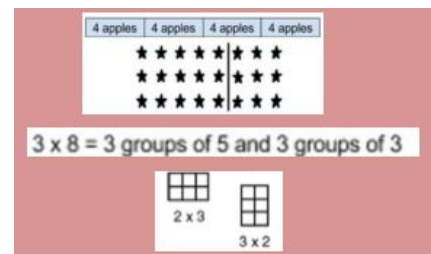
students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?"

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

Represents and solves word problems involving multiplication and division- Mathematically proficient students interpret products of whole numbers, ex 3×8 as the total number of objects in 3 groups of 8 objects each. Similarly, they interpret whole-number quotients of whole numbers, ex interpret $24 \div 8$ as the number of objects in each share when 24 objects are partitioned equally into 8 shares, or as a number of shares when 24 objects are partitioned into equal shares of 8 objects each. Mathematically proficient students communicate a story's context through accurate multiplication and division notation.



Understands properties of multiplication and the relationship between multiplication and division- Mathematically proficient students understand division as an unknown-factor problem. Ex. find $24 \div 6$ by finding the number that makes 24 when multiplied by 6.

Multiplies and divides within 100- Mathematically proficient students fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (knowing that $8 \times 9 = 72$, then you know $72 \div 9 = 8$) or properties of operations. Mathematically proficient students know multiplication facts by 0, 1, 2, 10, and 5 with automaticity. (End of the year standard is one digit by one digit from memory)

Solves problems using the four operations, and identifies and explains patterns in arithmetic- Mathematically proficient students solve multiplication and division problems using known strategies including, but not limited to, skip counting, repeated addition, representations, arrays, or known multiplication facts.

Numbers and Operations in Base Ten

Demonstrates fluency with basic addition and subtraction fact combinations to 20- Mathematically proficient students add and subtract within 20. Students solve problems within 3-5 seconds to demonstrate automaticity.

*** This is an end of grade 2 standard.***

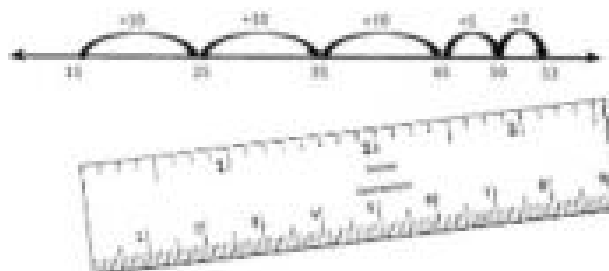
Measurement and Data

Solves problems involving measurement and estimation- Mathematically proficient students accurately tells and writes time to the nearest five minutes.



Represents and interprets data-

Mathematically proficient students collect, organize, represent, and describe categorical data. They model their data by accurately creating bar graphs and pictographs. Mathematically proficient students represent and analyze ordered, numerical data through the use of a line plot which may include fractions.



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 3](#)
- [Common Core State Standards for mathematics](#)
- [Helping your child learn mathematics, activities for grades PreK-5](#)