

**Clarification of Standards for Parents**  
**Grade 2 Mathematics Unit 1**

Dear Parents,

We want to make sure that you have an understanding of the mathematics your child will be learning this year. Below you will find the standards we will be learning in Unit One. Each standard is in bold print and underlined and below it is an explanation with student examples. Your child is not learning math the way we did when we were in school, so hopefully this will assist you when you help your child at home. Please let your teacher know if you have any questions.



**MGSE2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:**

This standard calls for students to work on decomposing numbers by place. Students should have ample experiences with concrete materials and pictorial representations examining that numbers all numbers between 100 and 999 can be decomposed into hundreds, tens, and ones.

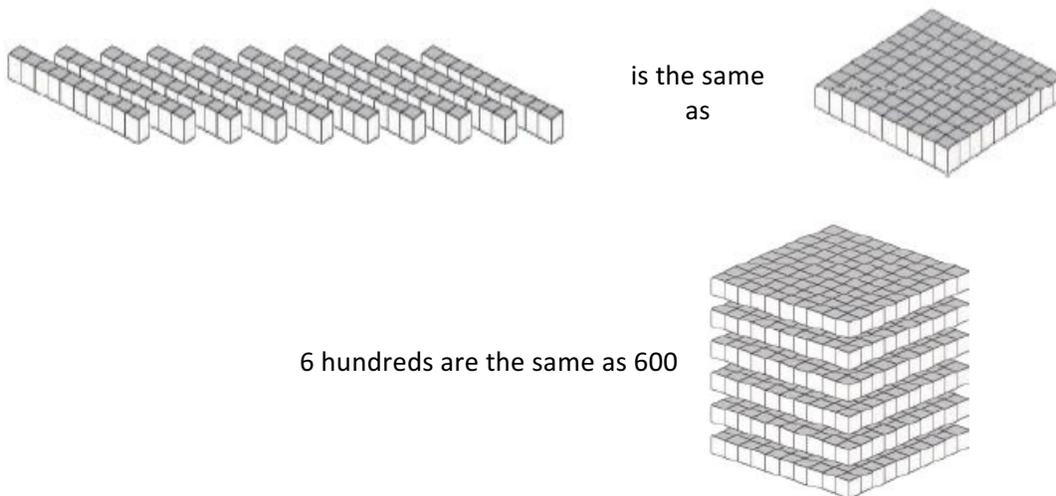
Use 10 as a benchmark number to compose and decompose when adding and subtracting whole numbers.

**a. 100 can be thought of as a bundle of ten tens — called a “hundred.”**

MGSE2.NBT.1a calls for students to extend their work from 1st Grade by exploring a hundred as a unit (or bundle) of ten tens.

**b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).**

MGSE2.NBT.1b builds on the work of MGSE2.NBT.1a. Students should explore the idea that numbers such as 100, 200, 300, etc., are groups of hundreds that have no tens or ones. Students can represent this with place value (base 10) blocks.



**MGSE2.NBT.2 Count within 1000; skip-count by 5s, 10s, and 100s.**

This standard calls for students to count within 1,000. This means that students are expected to —count on from any number and say the next few numbers that come afterwards.

Students should understand that counting by 2s, 5s and 10s is counting groups of items by that amount.

Example:

What are the next 3 numbers after 498? 499, 500, 501.

When you count back from 201, what are the first 3 numbers that you say? 200, 199, 198.

This standard also introduces skip counting by 5s and 100s. Students are introduced to skip counting by 10s in First Grade. Students should explore the patterns of numbers when they skip count. When students skip count by 5s, the ones digit alternates between 5 and 0. When students skip count by 100s, the hundreds digit is the only digit that changes, and it increases by one number.

**MGSE2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.**

This standard calls for students to read, write and represent a number of objects with a written numeral (number form or standard form). These representations can include place value (base 10) blocks, pictorial representations or other concrete materials. Please be mindful that when reading and writing whole numbers, the word “and” should not be used.

Example:

235 is written as two hundred thirty-five.

**MGSE2.NBT.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.**

This standard builds on the work of MGSE2.NBT.1 and MGSE2.NBT.3 by having students compare two numbers by examining the amount of hundreds, tens and ones in each number. Students are introduced to the symbols greater than (>), less than (<) and equal to (=) in First Grade, and use them in Second Grade with numbers within 1,000. Students should have ample experiences communicating their comparisons in words before using only symbols in this standard.

Example: 452 \_\_\_ 455

<p><b>Student 1</b></p> <p>452 has 4 hundreds, 5 tens, and 2 ones. 455 has 4 hundreds, 5 tens, and 5 ones. They have the same number of hundreds and the same number of tens, but 455 has 5 ones and 452 only has 2 ones. 452 is less than 455. 452 &lt; 455.</p>	<p><b>Student 2</b></p> <p>452 is less than 455. I know this because when I count up I say 452 before I say 455. 452 &lt; 455.</p>
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**MGSE2.OA.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.**

This standard calls for students to add and subtract numbers within 100 in the context of one- and two-step word problems.

In unit one, students focus on using addition and subtraction within 100 to solve one-step word problems.

Students should have ample experiences working on various types of problems that have unknowns in all positions, including:

Addition Examples:

<p><b>Result Unknown</b></p> <p>There are 29 students on the playground. Then 18 more students showed up. How many students are there now? (29 + 18 = ___)</p>	<p><b>Change Unknown</b></p> <p>There are 29 students on the playground. Some more students show up. There are now 47 students. How many students came? (29 + ___ = 47)</p>	<p><b>Start Unknown</b></p> <p>There are some students on the playground. Then 18 more students came. There are now 47 students. How many students were on the playground at the beginning? (___ + 18 = 47)</p>
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This standard also calls for students to solve one- and two-step problems using drawings, objects and equations. Students can use place value blocks or hundreds charts, or create drawings of place value blocks or number lines to support their work.

**MGSE2.OA.2 Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.**

This standard mentions the word *fluently* when students are adding and subtracting numbers within 20. Fluency means accuracy (correct answer), efficiency (within 4-5 seconds), and flexibility (using strategies such as making 10 or breaking apart numbers). Research indicates that teachers' can best support students' memorization of sums and differences through varied experiences making 10, breaking numbers apart and working on mental strategies, rather than repetitive timed tests.

Example:  $9 + 5 = \underline{\quad}$

**Student 1: *Counting On***

I started at 9 and then counted 5 more. I landed at 14.

**Student 2: *Decomposing a Number Leading to a Ten***

I know that 9 and 1 is 10, so I broke 5 into 1 and 4. 9 plus 1 is 10. Then I have to add 4 more, which gets me to 14.

Example:  $13 - 9 = \underline{\quad}$

**Student 1: *Using the Relationship between Addition and Subtraction***

I know that 9 plus 4 equals 13. So 13 minus 9 equals 4.

**Student 2: *Creating an Easier Problem***

I added 1 to each of the numbers to make the problem 14 minus 10. I know the answer is 4. So 13 minus 9 is also 4.

**MGSE2.MD.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?**

This standard calls for students to solve word problems involving either dollars or cents. Since students have not been introduced to decimals, problems should either have only dollars or only cents.

In unit one, students focus on solving word problems with pennies, nickels, and dimes.



Example: What are some possible combinations of coins (pennies, nickels, and dimes) that equal 37 cents?

**MGSE2.MD.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. This standard continues throughout the 2<sup>nd</sup> grade year.**

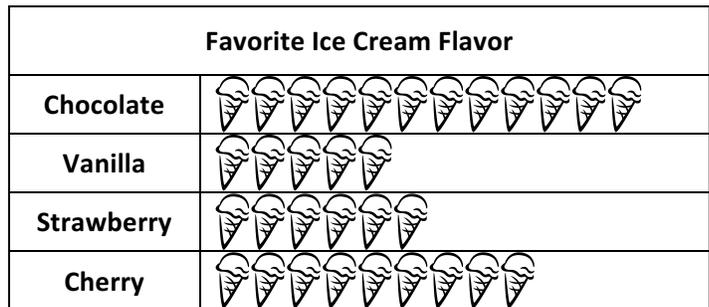
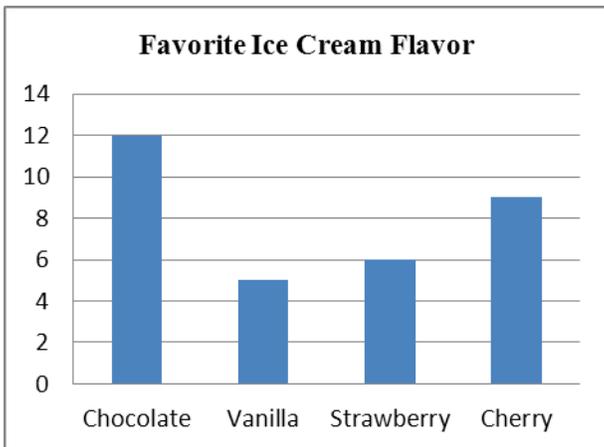
This standard calls for students to work with categorical data by organizing, representing and interpreting data. Students should have experiences posing a question with 4 possible responses and then work with the data that they collect.

Example: Students pose a question and the 4 possible responses. Which is your favorite flavor of ice cream: Chocolate, vanilla, strawberry, or cherry?

Students collect their data by using tallies or another way of keeping track. Students organize their data by totaling each category in a chart or table. Picture and bar graphs are introduced in 2<sup>nd</sup> Grade.

<b>Favorite Ice Cream Flavor</b>	<b>Number of People</b>
Chocolate	12
Vanilla	5
Strawberry	6
Cherry	9

Students display their data using a picture graph or bar graph using a single unit scale.



 represents 1 student

*(Adapted from Henry County Schools)*