

SECOND GRADE ENHANCED MATHEMATICS
UNIT 1 STANDARDS

Dear Parents:

We want to make sure 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 child's 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.

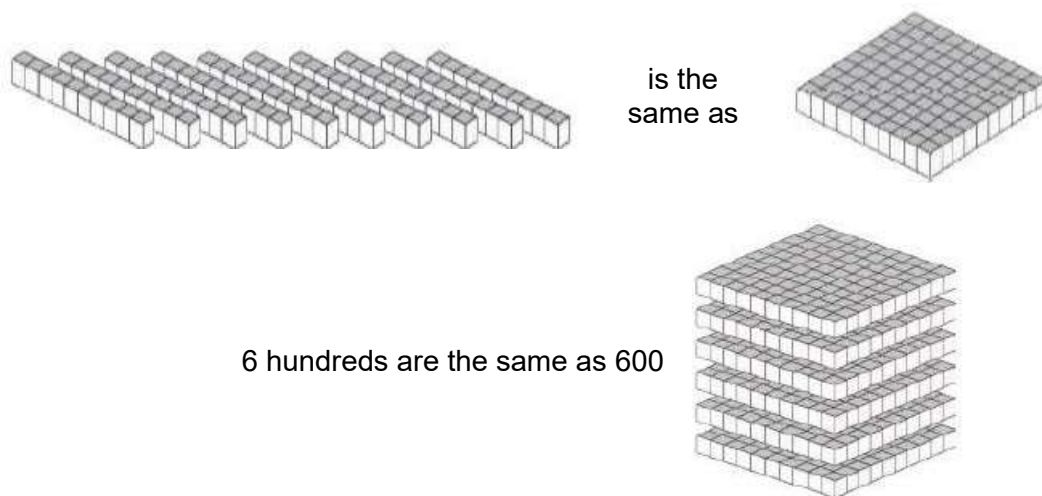
Use 10 as a benchmark number to compose and decompose when adding and subtracting whole numbers.

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.

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.

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

Student 1

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. $452 < 455$.

Student 2

452 is less than 455. I know this because when I count up I say 452 before I say 455. $452 < 455$.

MGSE.3.MD.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets. This standard continues throughout the year.




Students should have opportunities reading and solving problems using scaled graphs before being asked to draw one. The following graphs all use five as the scale interval, but students should experience different intervals to further develop their understanding of scale graphs and number facts. While exploring data concepts, students should **P**ose a question, **C**ollect data, **A**nalyze data, and **I**nterpret data (PCAI). Students should be graphing data that is relevant to their lives.

Example:

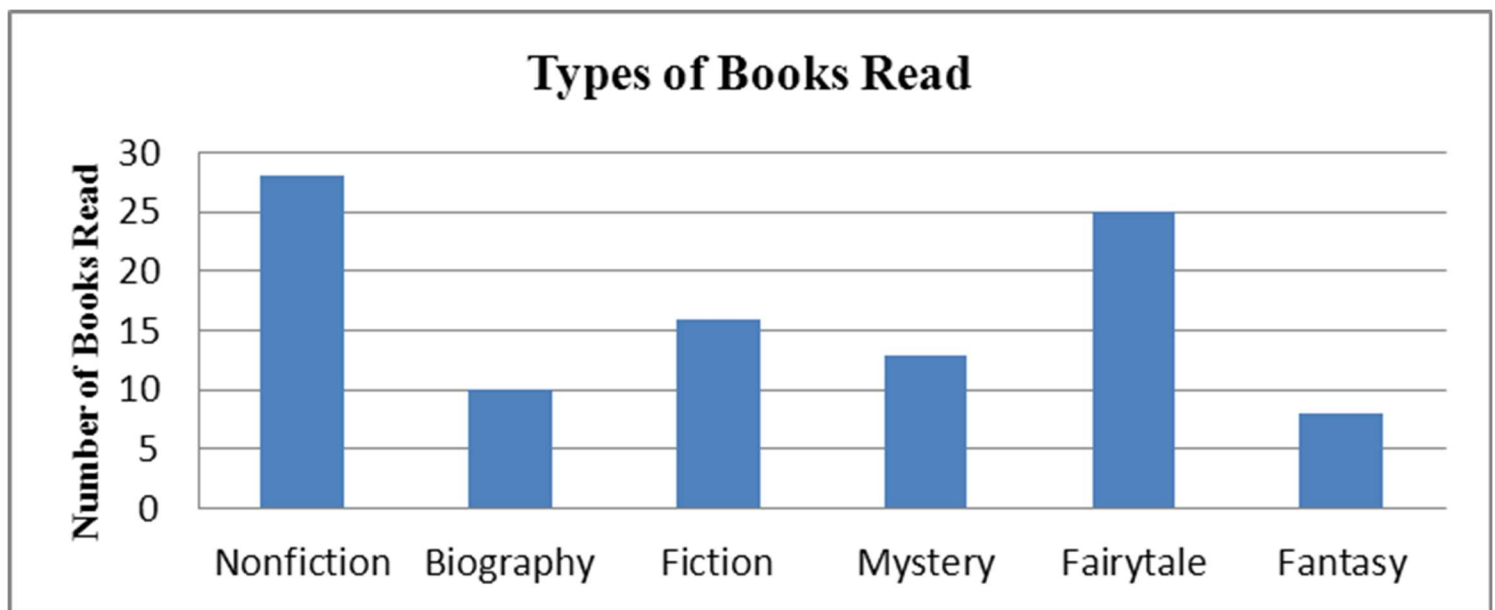
Pose a question: Student should come up with a question. What is the typical genre read in our class?

Collect and organize data: student survey

Pictographs: Scaled pictographs include symbols that represent multiple units. Below is an example of a pictograph with symbols that represent multiple units. Graphs should include a title, categories, category label, key, and data. How many more books did Juan read than Nancy?

Number of Books Read	
Nancy	
Juan	
 = 5 books	

Single Bar Graphs: Students use both horizontal and vertical bar graphs. Bar graphs include a title, scale, scale label, categories, category label, and data.



Analyze and Interpret data:

- How many more nonfiction books were read than fantasy books?
- Did more people read biography and mystery books or fiction and fantasy books?
- About how many books in all genres were read?
- Using the data from the graphs, what type of book was read more often than a mystery but less often than a fairytale?
- What interval was used for this scale?
- What can we say about types of books read? What is a typical type of book read?
- If you were to purchase a book for the class library which would be the best genre? Why?

Common Misconceptions

Although intervals on a bar graph are not in single units, students count each square as one. To avoid this error, have students include tick marks between each interval. Students should begin each scale with 0. They should think of skip-counting when determining the value of a bar since the scale is not in single units.

