

Dear Parents,

The Mathematics Georgia Standards of Excellence (MGSE), present a balanced approach to mathematics that stresses understanding, fluency, and real world application equally. Know that your child is not learning math the way many of us did in school, so hopefully being more informed about this curriculum will assist you when you help your child at home.

Below you will find the standards from Unit One in bold print and underlined. Following each standard is an explanation with student examples. Please contact your child's teacher if you have any questions.

NBT.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (1-100 in this unit)

This standard calls for students to rote count forward to 120 by counting on from any number less than 120. This standard also calls for students to read, write and represent a number of objects with a written numeral. Students can represent numbers using cubes, place value (base 10) blocks, pictorial representations, or other concrete materials. As students are developing accurate counting strategies, they are also building an understanding of how the numbers in the counting sequence are related—each number is one more (or one less) than the number before (or after).

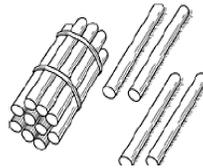
NBT.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:

a. 10 can be thought of as a bundle of ten ones – called a “ten.”

This part of the standard asks students to think of a group of ten ones as a whole unit: a ten. This is the foundation of the place value system. So, rather than seeing a group of ten cubes as ten individual cubes, the student is now asked to see those ten cubes as a bundle – one bundle of ten.

Example:

- This model represents 1 ten and 4 more ones think “10, 11, 12, 13, 14” instead of 1, 2, 3,



or 14. The student should 4, ..., 14.

b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.

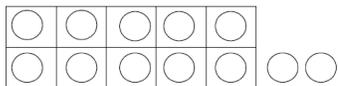
This part of the standard asks students to extend their work from kindergarten when they composed and decomposed numbers from 11 to 19 into ten ones and some further ones. In kindergarten, everything was thought of as individual units: —ones. In first grade, students are asked to think of those ten individual ones as a whole unit: —one ten. Students in first grade explore the idea that the teen numbers (11 to 19) can be expressed as *one* ten and some leftover ones. Ample experiences with ten frames will help develop this concept.

Example:

- For the number 12, do you have enough to make a ten? Would you have any leftover? If so, how many leftovers would you have?

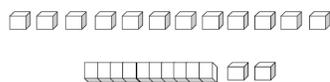
Student 1:

I filled a ten-frame to make one ten and had two counters left over. I had enough to make a ten with some left over. The number 12 has 1 ten and 2 ones.



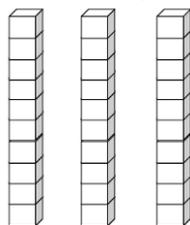
Student 2:

I counted out 12 place value cubes. I had enough to trade 10 cubes for a ten-rod. I now have 1 ten-rod and 2 cubes left over. So the number 12 has 1 ten and 2 ones.



c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).

This part of the standard builds on the work of NBT.2b. Students should explore the idea that decade numbers (e.g., 10, 20, 30, 40) are groups of tens with no left over ones. Students can represent this with cubes or place value (base 10) rods. It is recommended to make a ten with unifix cubes or other materials that students can group. Provide students with opportunities to count books, cubes, pennies, etc. Counting larger numbers of objects supports grouping to keep track of the number of objects.



NBT.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.

This standard builds on the work of NBT.1 and NBT.2 by having students compare two numbers by examining the amount of tens and ones in each number. Students are introduced to the symbols greater than ($>$), less than ($<$) and equal to ($=$). Students should have ample experiences communicating their comparisons using words, models and in context before using only symbols.

Example: 42 45

Student 1:

42 has 4 tens and 2 ones. 45 has 4 tens and 5 ones. They have the same number of tens, but 42 has fewer ones than 45. Because 42 is less than 45, I can write that as $42 < 45$.

Student 2:

42 is less than 45. I know this because when I count up I say 42 before I say 45. I can write $42 < 45$.

NBT.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.

This standard builds on students' work with tens and ones by mentally adding ten more and ten less than any number less than 100. Ample experiences with ten frames and the hundreds chart help students use the patterns found in the tens place to solve such problems.

Example:

There are 74 birds in the park. 10 birds fly away. How many are left?

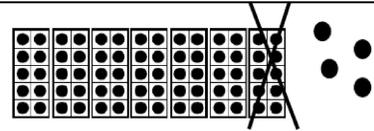
Student 1

I used a 100s board. I started at 74. Then, because 10 birds flew away, I moved back one row. I landed on 64. So, there are 64 birds left in the park.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Student 2

I pictured 7 ten-frames and 4 left over in my head. Since 10 birds flew away, I took one of the ten-frames away. That left 6 ten-frames and 4 left over. So, there are 64 birds left in the park.



Fayette County NBT.7 Identify dimes, and understand ten pennies can be thought of as a dime. (Use dimes as manipulatives in multiple mathematical contexts.)

This standard asks students to work in a variety of opportunities with dimes and pennies daily. Ideas include (but are not limited to):

- Coin rubbings to help identify pennies and dimes.
- Using the date as a sum of coins by amount and asking what combination of coins could equal today's date. Example: September 14, "What combinations of pennies and dimes could equal 14 cents?"
- Using dimes and pennies as manipulatives.

Fayette County NBT.8 Use concrete representations (e.g., hundreds chart, 99 chart) to explore number patterns and relationships.

This standard asks students to explore patterns on the hundreds chart (or 99 chart). They should look for patterns that involve tens and ones, before/after/between, etc.

Fayette County NBT.9 Skip count forward up to 120 by 5s and 10s.

Although this standard calls for students to skip count forward up to 120 by 5s and 10s, in this unit students will focus on skip counting by tens. They will also complete and extend number patterns that involve skip counting by tens.

Example:

What is the missing number in the pattern below?

40, 50, 60, ____, 80, 90

Fayette County NBT.10 Know the number words to twenty.

This standard expects that students read the number words to twenty and be able to produce models for those number words.

Example:

Write the number for the words below:

- seventeen
- twelve
- zero