**1st Grade Singapore**

**Math: Numbers to 40**

**Summary:** In this domain, students will learn how to count forwards and backwards, read and write, and compare numbers within 40. Two-digit numbers within 40 are introduced as being a group of tens and additional ones and 40 as being 4 tens. Students will learn to add by making a 10 first, then add ones. Similarly, with subtraction, students are taught to group in ones and tens before taking away and then adding on the remaining amount. The count on and count back strategy is introduced when adding or subtracting 1, 2, or 3.

**The Big Idea:** When adding or subtracting numbers up to 40, use the make ten or subtract ten strategies. Use the count on or count back strategy when adding or subtracting 1, 2, or 3.

**Colorado State Standards:**

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| K.1.1.d. Compare two sets of objects to at least 25 using language such as “more,” “less,” or “the same.” |

1.1.1.a. Count, read, and write numbers to 100.

1.1.1.c. Represent quantities using tens units and ones units.

1.1.1.d. Locate numbers up to 100 on a number display.

1.1.2.a. Use addition when putting sets together and subtraction for breaking sets apart or describing the difference between sets.

1.1.2.b. Use number relationships such as doubles, one more or one less, and the relationship between composing and decomposing to solve addition and subtraction problems.

1.1.2.d Demonstrate fluency with basic addition and related subtraction facts through sums to 10.

2.1.2.c Create stories and models, including linear and difference, to illustrate addition and subtraction.

4.2.1.d Find the unknown in simple equations.

**Common Core Standards**:

K.NBT 1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation; understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

1.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.NBT 2. Understand that the two digits of a two-digit number represent amounts of tens and ones.

1.NBT 4.Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain

the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

1.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.

1.NBT 6.Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

1.OA 1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

1.OA 2.Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

1.OA 5.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2)

1.OA 6.Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 +6 = 8 + 2 + 4 = 10 + 4 = 14**);** decomposing a number leading to a ten(e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 =9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8= 4); and creating equivalent but easier or known sums (e.g., adding 6 +7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).

**Singapore Unit:**

1. Numbers to 40
2. Count within 40 by making 10 first
3. Tens and ones
4. Count back from 40
5. Add a 10, subtract a 10
6. Compare
7. Ordered sequence
8. “Make 10” strategy for adding
9. Adding a 2-digit number and a 1-diget number
10. Subtraction of a 1-digit number from a 2-digit number
11. Review- Adding by counting-on
12. Review- Subtraction by counting-back

**Core Knowledge Language Arts:**

I. Listening and Speaking

A. Presentation of Ideas and Information

* Follow multi-step, oral directions.
* Provide simple explanations.

B. Comprehension and Discussion of Read-Alouds

* Describe illustrations.

**Previous Unit:** Graphs

**Prior Knowledge:**

Kindergarten

* Count by 1’s to 100 from any given number
* Count to 100 by groups of ten
* Write numbers to 100
* Represent and write the numerals in tens and ones
* Count by 5’s to 50
* Count by 2’s to 20

**Next: Unit:** Multiplication

**What Students will Learn in Future Grades:**

Second Grade

* Meanings of addition and subtraction
* Using the terms “part” and “whole”
* Methods of mental addition and subtraction: find the missing part
* Addition and subtraction with and without renaming
* Numbers to 1000

**Cross Curricular Links:**

Language Arts

I. Phonics

* Phonograms are parts of whole words
* Syllables are parts of whole words

II. Grammar

* Parts that make up a whole sentence

**Additional Resources:**

For Teachers:

* *Singapore Standard Edition Primary Mathematics Extra Practice,* Tay Choon Mong
* *New Enrichment Mathematics for Primary,* Pan Pacific Publications, Pauline Ong
* *Know Your Maths: Topical Exercises for Primary One*, Tinoh Chan