**1st Grade Singapore**

**Math: Comparing Numbers and Graphs**

**Summary:** **Comparing Numbers** -In this domain, students will use the phrases “more than” and “less than” to describe picture sets of objects. Students will also compare numbers without using pictures. Students will understand how to compare two groups by using subtraction. **Graphs:** - In this domain, students will create and interpret picture graphs and bar graphs. Students will use graphs to find the most and least, as well as finding the difference between two items on the graph.

**The Big Idea:** Students will use subtraction to find the difference between two groups, and apply this skill to gathering data from a graph.

**Colorado State Standards:**

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| 1.1.1.e. Compare two sets of objects, including pennies, up to at least 25 using language such as "three more or three fewer" | |
| 1.3.1.a. Contribute individual data to classroom data display  1.3.1.b. Read information from picture graphs, bar graphs, and tally charts  1.3.1.c. Describe data by applying the concepts of largest, smallest and most often  2.3.1.a. Construct picture graphs and bar graphs from a data set  2.3.1.b. Read and explain information in picture graphs and bar graphs |

**Common Core Standards**:

**K.MD 2** Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.

**1.MD 4**. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

**2. 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 problems4 using information presented in a bar graph.

**Core Knowledge Language Arts:**

I. Listening and Speaking

A. Presentation of Ideas and Information

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

**Singapore Unit:**

1. More than and less than
   1. One more and one less
   2. Comparison by subtraction
2. Graphs
   1. One-to-one representation
   2. Reading and interpreting data

**Previous Unit:** Numbers to 20

**Prior Knowledge:**

**Kindergarten**

* Numbers and Number Sense
  + Using concrete objects and pictorial representations, compare sets:
    - Same as (equal)
    - More than
    - Less than
    - Most
    - Least
  + Count
    - Forward from 1 to 31, first beginning with 1, and later from any given number
    - Backward from 10
    - From 1 to 10 by twos
    - By fives and tens to 50
  + Write numbers 1-31 (with special attention to the difference between certain written symbols, such as 6 and 9; 1 and 7; 12 and 21, etc.)
  + Count and write the number of objects in a set
  + Given a number, identify one more, one less
  + Identify ordinal position, first (1st) through sixth (6th)
  + Identify pairs
  + Interpret simple pictorial graphs
  + Identify ½ as one of two equal parts of a region or object; find ½ of a set of concrete objects

**Next: Unit:** Numbers to 40

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

Second Grade

* Numbers and Number Sense 1-1,000
  + Read and write words for numbers from one to one-thousand
  + Order and compare numbers to 1,000, using the signs <,>, and =
  + Count
    - By twos, threes, fives, and tens
    - By tens from any given number
    - By hundreds to 1,000; by fifties to 1,000
    - Forward and backward
  + Use a number line
  + Use tallies
  + Identify ordinal position, 1st to 20th, and write words for ordinal numbers
  + Identify even and odd numbers
  + Identify dozen and pair
  + Recognize place value: ones, tens, hundreds, thousands
  + Write numbers up to hundreds in expanded form (i.e. 64 = 60 + 4; 367 = 300 + 60 + 7)
  + Given a number, identify one more and one less; ten more, ten less
  + Round to the nearest ten
  + Create and interpret simple bar graphs
  + Identify and extend numerical and symbolic patterns
  + Record numeric data systematically and find the lowest and highest values in a data set

**Cross Curricular Links:**

N/A

**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