Southmoreland School District
1st Grade Math Curriculum Overview

Overview:

At this level it is expected that students will be able to demonstrate fluency using addition and subtraction strategies and to understand and apply properties of operations and the relationship between addition and subtraction using place value concepts. Students will also be able to represent and interpret data using tables/charts, tell and write time to the nearest half hour using both analog and digital clocks and compose and distinguish between two- and three-dimensional shapes based on their attributes.

Module Titles:

Module 1: Addition and Subtraction Concepts and Strategies to 20
Module 2: Place Value, Comparison, Regrouping, and Problem Solving
Module 3: Measurement and Data
Module 4: Geometry

Module Overviews:

Module 1: Addition and Subtraction Concepts and Strategies to 20
In Grade 1, the students will work with numbers to 20 continues to be a major stepping-stone in learning the place value system. Students work to build fluency with addition and subtraction facts by learning multiple strategies to add and subtract within 20 such as counting on and back, doubles, number lines, identifying part to whole, and using ten frames and counters. Problem solving and writing addition sentences both horizontally and vertically is also an integral part of instruction. Students will 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. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2)

Module 2: Place Value, Comparison, Regrouping, and Problem Solving
This module focuses on understanding place value. Students group numbers into tens and ones using cubes. Students will also be able to identify ten more and ten less than a given number. They will also compare numbers using symbols. Students will apply their place value knowledge to add and subtract two digit numbers and use regrouping strategies as needed. Students will be able to identify a number as odd or even. Students 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. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.

Module 3: Measurement and Data
Students learn how to organize and interpret data on charts and graphs through tally charts, bar graphs, and pictographs. Students tell and write time in hours and half-hours using analog and digital clocks.They also use objects to compare and measure lengths of objects. Students will compare and order standard and non-standard units of length. Students determine the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Students order three objects by length; compare the lengths of two objects indirectly by using a third object. They will 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

Module 4: Geometry
In Module 4, students think about attributes of shapes and practice composing and decomposing geometric shapes. They learn how to recognize two dimensional shapes as well as divide them into equal shares. Students identify three dimensional shapes and combine them to create other composite shapes. Students will divide shapes into halves and fourths. They can distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. Students will compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes to create a composite shape, and compose new shapes from the composite shape. The students will be able to partition circles and rectangles into two and four equal shares, describe the shares using the words halves and fourths, and use the phrases "half-of" and "fourth-of". Students will understand that decomposing shapes into more equal shares creates smaller shares.