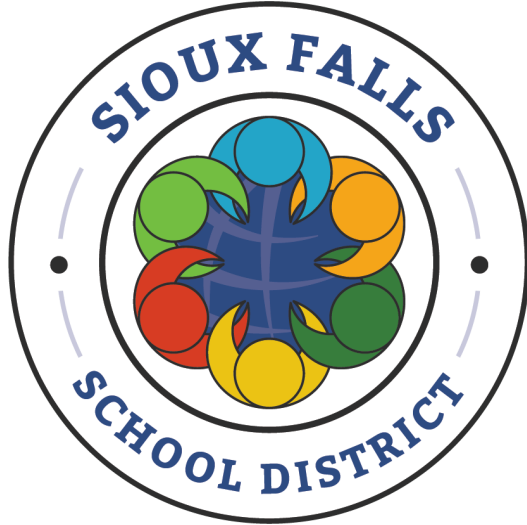




Sioux Falls School District

Curriculum Guide

1st Grade Math

August 2021

Vision, Mission & Goals

Course Description:

Investigations 3 is a focused, coherent, and rigorous K-5 mathematics curriculum. It is aligned to content standards and mathematical practices. Investigations has designed their product with deep and careful attention to mathematics content as well as student thinking and understanding. Making sense of mathematics is the heart of the work, for students and teachers.

Investigations 3 is grounded in research based practices aimed at improving the teaching and learning of elementary mathematics. The underlying guiding principles are:

- The curriculum supports all students in developing and expanding their mathematical ideas.
- The curriculum supports the ongoing learning about mathematics content, pedagogy, and student learning.
- The curriculum provides a clear, focused, and coherent mathematical agenda and supports teachers in implementing in a way that accommodates the needs of their students.



COURSE AT A GLANCE

Quarter 1

Unit 1: Building Numbers and Solving Story Problems

This unit focuses on counting and comparing quantities, connecting counting to the operations of addition and subtraction, and developing an understanding of and strategies for solving addition and subtraction problems via story problems and games. Because it is the first unit, it also introduces the processes, structures, and materials that form the basis of math instruction throughout the year, and establishes the mathematical community. As part of this work, several year long classroom routines are introduced that offer regular practice with counting and combining, number composition, developing visual images of quantities, collecting and analyzing data, and working with time.

- Investigation 1: Counting and Quantity
- Investigation 2: Introducing Addition
- Investigation 3: Introducing Subtraction

Unit 2: Comparing and Combining Shapes

The focus of this unit is on observing and describing defining attributes of 2-D shapes, using those attributes to build, compare, and sort 2-D shapes, and composing and decomposing 2-D shapes. Students identify and describe familiar shapes in their environment. They describe, name, and compare attributes of 2-D shapes, particularly triangles and quadrilaterals. Students find combinations of shapes that fill a region, and investigate different ways to compose a shape from, or decompose a shape into, smaller shapes.

- Investigation 1: Composing and Decomposing 2-D Shapes
- Investigation 2: Describing and Sorting Shapes

Unit 3: How Many of Each? How Many in All

This unit focuses on counting on/back as a strategy for adding/subtracting; composing and decomposing numbers into two or more parts and playing games that involve an unknown change; adding more than two numbers; expanding students' understanding of addition and subtraction notation, in particular the meaning of the equal sign; and counting and comparing larger quantities. Number composition and beginning place value is also a focus. As they use Ten Frame cards to build numbers to 30, students shift to seeing a group of ten ones as one ten and think about

how many “ten cards” they need to represent a given number.

- Investigation 1: Counting On and Back
- Investigation 2: How Many of Each?
- Investigation 3: Multiple Addends and Equivalent Expressions
- Investigation 4: Working with Larger Numbers

Unit 4: Fish Lengths and Fraction Rugs

This unit focuses on developing accurate techniques for linear measurement, solving comparison problems about length, and on ideas about time and fractions as equal parts of a whole. Students indirectly compare the lengths of objects, measure the lengths of various objects using several different units, including inch tiles, and compare two lengths to determine how much longer or shorter one object is than the other. They observe and describe shapes (circles, squares, rectangles) that are (and are not) divided into halves and fourths, and partition shapes to show halves and fourths. Students achieve fluency with telling time to the hour, and are also introduced to telling time to the half hour.

- Investigation 1: Measuring and Comparing
- Investigation 2: Halves and Fourths

Unit 5: Number Games and Crayon Problems

This unit focuses on developing fluency with addition and subtraction within 10, including the 2-addend combinations of 10, understanding of the meaning of the equal sign as a symbol of equivalence, and deepening students’ understanding of addition and subtraction through problems and games that involve finding an unknown addend or an unknown change. Students continue to compose and decompose 2-digit numbers and to represent them as the sum of multiples of ten and some number of ones (e.g., $22 = 20 + 2$), reinforcing foundational ideas of number composition and place value.

- Investigation 1: Combinations of 10
- Investigation 2: Addition and Subtraction
- Investigation 3: Problems about Unknown Change

Unit 6: Would You Rather Be an Eagle or a Whale?

This unit focuses on collecting, recording, representing, describing and comparing data in two and three categories, and on conducting data investigations. As students engage in their own surveys, they use data to model real-world problems with mathematics. Story problems about survey data provide a context for solving comparison problems with the difference, the bigger amount, or the smaller amount unknown.

- Investigation 1: Collecting, Representing, and Solving Problems About Data in Two Categories
- Investigation 2: Organizing and Analyzing Data in 3 Categories

Unit 7: How Many Tens? How Many Ones?

This unit focuses on counting by numbers other than 1, with an emphasis on groups of 10; adding and subtracting 10 from a 2-digit number, and subtracting a multiple of 10 from a multiple of 10; and on representing 2-digit numbers with tens and ones and using those models to add within 100. Students use contexts such as fingers on students, dots on Ten Cards, and cubes in towers of 10 to represent numbers as tens and ones, to determine a quantity presented as tens and ones, and to compare and add numbers within 100, including situations with more than 10 ones.

- Investigation 1: Counting, Adding, and Subtracting Groups of 10
- Investigation 2: Tens and Ones
- Investigation 3: Adding Within 100

Unit 8: Blocks and Buildings

The focus of this unit is on observing, describing, comparing, and building 3-D shapes and on developing vocabulary for naming and describing defining attributes of 2-D and 3-D shapes. As they describe, draw, and build with Geoblocks, students identify and compare attributes of 3-D shapes, compose and decompose 3-D shapes, and explore the relationship between 2-D and 3-D shapes. They also demonstrate fluency with telling time to the half hour.

- Investigation 1: Blocks and Buildings

[South Dakota State Math Standards](#)