Hansen Elementary

Math Scope and Sequence

MATHEMATICAL PRACTICES:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Kindergarten

Kindergarten Overview

Counting and Cardinality

- Know number names and the count sequence.
- Count to tell the number of objects.
- Compare numbers.

Operations and Algebraic Thinking

- Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

Number and Operations in Base Ten

- Work with numbers 11–19 to gain foundations for place value.

Measurement and Data

- Describe and compare measurable attributes
- Classify objects and count the number of objects in categories.

Geometry

- Identify and describe shapes.
- Analyze, compare, create, and compose shapes.

Module 1 Theme: Numbers to 10	Module 2 Theme: 2-D and 3-D Shapes	Module 3 Theme: Comparison with Length, Weight, Capacity, and Numbers to 10	Module 4 Theme: Number pairs, Addition and Subtraction to 10	Module 5 Theme: Numbers 10-20 and Counting to 100	Module 6 Theme: Analyzing, Comparing, and Composing Shapes
36 days	12 days	20 days	32 days	20 days	8 days

First Grade

Grade 1 Overview

Operations and Algebraic Thinking

- Represent and solve problems involving addition and subtraction.
- Understand and apply properties of operations and the relationship between addition and subtraction.
- Add and subtract within 20.
- Work with addition and subtraction equations.

Number and Operations in Base Ten

- Extend the counting sequence.
- Understand place value.
- Use place value understanding and properties of operations to add and subtract.

Measurement and Data

- Measure lengths indirectly and by iterating length units.
- Tell and write time.
- Represent and interpret data.

Geometry

- Reason with shapes and their attributes.

Module 1 Theme: Sums and Differences to 10	Module 2 Theme: Sums and Differences to 20	Module 3 Theme: Introduction to Place Value through Addition and Subtraction within 20	Module 4 Theme: Place Value Comparison, Addition and Subtraction to 40	Module 5 Theme: Identifying, Composing, and Partitioning Shapes	Module 6 Theme: Place Value, Comparison, Addition and Subtraction to 100
54 Days	24 Days	14 Days	12 Days	13 Days	28 Days

Second Grade

Grade 2 Overview

Operations and Algebraic Thinking

- Represent and solve problems involving addition and subtraction.
- Add and subtract within 20.
- Work with equal groups of objects to gain foundations for multiplication.

Number and Operations in Base Ten

- Understand place value.
- Use place value understanding and properties of operations to add and subtract.

Measurement and Data

- Measure and estimate lengths in standard units.
- Relate addition and subtraction to length.
- Work with time and money.
- Represent and interpret data.

Geometry

- Reason with shapes and their attributes.

Module 1	Module 2	Module 3	Module 4	Module 5	Module 6	Module 7	Module 8
Theme: Sums and Differences to 100	**Theme: Addition and Subtraction of Lengths and units**	**Theme: Place Value, Counting, and Comparison of Numbers to 1,000**	**Addition and Subtraction within 200 with Word Problems to 100**	**Theme: Addition and Subtraction within 1,000 with Word Problems to 100**	**Theme: Foundations of Multiplication and Division**	**Theme: Problem Solving with Length, Money, and Data**	**Theme: Time, Shapes, and Fractions as Equal Parts of Shapes**
10 days	**12 days**	**25 days**	**35 days**	**24 days**	**24 days**	**30 days**	**18 days**

Third Grade

Grade 3 Overview

Operations and Algebraic Thinking

- Represent and solve problems involving multiplication and division.
- Understand properties of multiplication and the relationship between multiplication and division.
- Multiply and divide within 100.
- Solve problems involving the four operations, and identify and explain patterns in arithmetic.

Number and Operations in Base Ten

- Use place value understanding and properties of operations to perform multi-digit arithmetic.

Number and Operations—Fractions

- Develop understanding of fractions as numbers.

Measurement and Data

- Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.
- Represent and interpret data.
- Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
- Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

Geometry

- Reason with shapes and their attributes.

Module 1 Theme: Properties of Multiplication and Division and Solving Problems with Units of 2-5 and 10	**Module 2 Theme: Place Value and Problem Solving with Units of Measure**	**Module 3 Theme: Multiplication and Division with Units of 0,1,6-9, and Multiples of 10**	**Modules 4 Theme: Multiplication and Area**	**Module 5 Theme: Fractions as Numbers on the Number Line**	**Module 6 Theme: Collecting and Displaying Data**	**Module 7 Theme: Geometry and Measurement Word Problems**
20 days	**16 days**	**20 days**	**12 days**	**32 days**	**12 days**	**16 days**

Fourth Grade

Grade 4 Overview

Operations and Algebraic Thinking

- Use the four operations with whole numbers to solve problems.
- Gain familiarity with factors and multiples.
- Generate and analyze patterns.

Number and Operations in Base Ten

- Generalize place value understanding for multi-digit whole numbers.
- Use place value understanding and properties of operations to perform multi-digit arithmetic.

Number and Operations—Fractions

- Extend understanding of fraction equivalence and ordering.
- Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
- Understand decimal notation for fractions, and compare decimal fractions.

Measurement and Data

- Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
- Represent and interpret data.
- Geometric measurement: understand concepts of angle and measure angles.

Geometry

- Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

Module 1 **Theme:** **Place Value, Rounding, and Algorithms for addition and subtraction**	**Module 2** **Theme:** **Unit conversions and problem solving with Metric Measurement**	**Module 3** **Theme:** **Multi-digit Multiplication and Division**	**Module 4** **Theme:** **Angle Measurement and Plane Figures**	**Module 5** **Theme:** **Fraction Equivalence, Ordering, and Operations**	**Module 6** **Theme:** **Decimal Fractions**	**Module 7** **Theme:** **Exploring Measurement with Multiplication**
24 days	**7 days**	**40 days**	**Throughout the year**	**43 days**	**18 days**	**Throughout the year**

Fifth Grade

Grade 5 Overview

Operations and Algebraic Thinking

- Write and interpret numerical expressions.
- Analyze patterns and relationships.

Number and Operations in Base Ten

- Understand the place value system.
- Perform operations with multi-digit whole numbers and with decimals to hundredths.

Number and Operations-Fractions

- Use equivalent fractions as a strategy to add and subtract fractions.
- Apply and extend previous understandings
  of multiplication and division to multiply and divide fractions.

Measurement and Data

- Convert like measurement units within a given measurement system.
- Represent and interpret data.
- Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

Geometry

- Graph points on the coordinate plane to solve real-world and mathematical problems.
- Classify two-dimensional figures into categories based on their properties.

Module 1 Place Value and Decimal Fractions	Module 2 Multi-Digit Whole Number and Decimal Fraction Operations	Module 3 Addition and Subtraction of Fractions	Module 4 Multiplication and Division of Fractions and Decimal Fractions	Module 5 Addition and Multiplication with Volume and Area	Module 6 Problem Solving with the Coordinate Plane
26 Days	28 Days	28 Days	28 Days	12 Days	Throughout the year

Sixth Grade

Grade 6 Overview

Ratios and Proportional Relationships

- Understand ratio concepts and use ratio reasoning to solve problems.

The Number System

- Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
- Compute fluently with multi-digit numbers and find common factors and multiples.
- Apply and extend previous understandings of numbers to the system of rational numbers.

Expressions and Equations

- Apply and extend previous understandings of arithmetic to algebraic expressions.
- Reason about and solve one-variable equations and inequalities.
- Represent and analyze quantitative relationships between dependent and independent variables.

Geometry

- Solve real-world and mathematical problems involving area, surface area, and volume.

Statistics and Probability

- Develop understanding of statistical variability.
- Summarize and describe distributions.

Unit 1 Area and Surface Area	Unit 2 Introducing Ratios	Unit 3 Unit Rates and Percentages	Unit 4 Dividing Fractions	Unit 5 Arithmetic in Base 10	Unit 6 Expressions and Equations	Unit 7 Rational Numbers	Unit 8 Data Sets and Distribution
18 days	16 days	17 days	16 days	14 days	19 days	19 days	19 days