SWALLOW SCHOOL DISTRICT CURRICULUM GUIDE	
Curriculum Area: Math	**Course Length:** Full Year
Grade: 4th	**Date Last Approved:** March 15, 2018; **Reviewed** Spring 2021

Stage 1: Desired Results

Course Description and Purpose:

In Grade 4, instructional time should focus on three critical areas: (1) developing understanding and fluency with multi digit multiplication, and developing understanding of dividing to find quotients involving multidigit dividends; (2) developing and understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers; (3) understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

Enduring Understanding(s):

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.

Essential Question(s):

1. How can I use the four operations with whole numbers to solve multistep word problems?
2. How can the use of factors and multiples be used in multiplication?
3. How can analyzing patterns help solve algebraic patterns?
4. How does generalizing place value for multi digit numbers and properties of operations help to perform multi digit arithmetic?
5. How can I extend understanding of fractions equivalence and ordering?
6. How can I interpret decimal notation and compare decimal fractions while extending previous understandings of operations of whole numbers?
7. How can I solve problems involving measurement and conversion of measurements from a larger unit to a smaller measurement?
8. How can I represent and interpret data using statistical landmarks?
9. How can I understand concepts of angles and measure angles?

Learning Targets:

1. Students can analyze proportional relationships. (skill)
2. Students can solve and support their knowledge of operations with rational numbers to demonstrate number sense. (skill)
3. Students can develop problem solving strategies to persevere in solving real world mathematical problems. (skill)
4. Students can distinguish between geometric figures and apply appropriate formulas to solve geometric problems. (skill)
5. Students can solve problems involving measurement and can produce graphs that represent and interpret data. (skill / product)

Stage 2: Learning Plan

I. Naming and Constructing Geometric Figures

A. Identify, construct, and name Points, Line Segments, Lines, and Rays

B. Describe properties and construct Angles, Triangles, and Quadrangles

a. Define and classify properties of quadrangles

b. Identify, construct and develop definitions for convex and nonconvex polygon

Standards Referenced :CCSS: 4.G 12, 4.G 5.A,

Learning Targets Addressed:
Target 3
Target 4
Target 5

Key Unit Resources
● Everyday Math 4th Edition ● IXL

Assessment Map:

Type	Level	Assessment Detail
Practice	Knowledge	● Journal ● Home Links
Formative	Skills/ Reasoning	● Quiz Drawing lines, rays, and angles ● Quiz Identifying polygons
Summative	Product	● Unit Assessment ● Open Response

II. Using Numbers and Organizing Data

A. Give equivalent mathematical expressions for whole numbers and insert grouping symbols to make number sentences true.

B. Use conventional notation to express numbers using the four Arithmetic operations

C. Read and write numbers up to a million and identify the values of digits.

D. Display data by making line plots

E. Add and subtract multi digit problems using various algorithms

Standards: CCSS: 4.OA.1,3,5 4NBT.1,2,4 4.MB 1,2

Learning Targets Addressed:

Target 2
Target 3
Target 5

Key Unit Resources
• Everyday Math 4th Edition • IXL

Assessment Map:

Type	Level	Assessment Detail
Practice	Knowledge	• Journal • HomeLinks
Formative	Skills/ Reasoning	• Quiz place value to millions • Quiz Addition and subtraction of multidigit numbers
Summative	Product	• Unit assessments • Open Response

III. Multiplication; Number Sentences and Algebra

A. Review What's My Rule?
B. Strategies for learning multiplication facts
C. Introduce a simplified approach for solving number stories
D. Meanings of number sentences and determine whether sentences are true or false.
a. Insert grouping symbols to make number sentences true
b. Introduce vocabulary and notation for open number sentences

Standards: CCSS: 4.OA.15

Learning Targets Addressed:
Target 1
Target 2
Target 3

Key Unit Resources
● Everyday Math 4th Edition ● IXL

Type	Level	Assessment Detail
Practice	Knowledge	● Journal ● Home Links
Formative	Skills/ Reasoning	● Reading a bar graph ● Factors, multiples using a Venn Diagram
Summative	Product	● Unit Assessments ● Open Response

IV. Decimals and Their Uses

A. Extend the base ten place value system to decimals
B. Understand basic concepts and notation for decimals through hundredth and extend to thousandth.
C. Compare and order decimals in tenths and hundredths.
D. Using decimals to guide estimation of sums and differences.
E. Add and subtract decimals
F. Understand relationships among metric units
G. Measure to the nearest millimeter and convert measurements between millimeters and centimeters.

Standards: CCSS: 4NF (5, 6, &7)

Learning Targets Addressed:
Target 1
Target 2
Target 3
Target 5

Key Unit Resources
● Everyday Math 4th Edition ● IXL

Assessment Map:

Type	Level	Assessment Detail
Practice	Knowledge	● Journal ● Home Links
Formative	Skills/ Reasoning	● Compare decimals and place values
Summative	Product	● Unit Assessment ● Open Response

V. Big Numbers, Estimation, and Computation

A. Describe patterns to solve problems
B. Write numbers in expanded notation
C. Evaluate numeric expressions containing parentheses
D. Use the Distributive Property of Multiplication
E. Estimate whole numbers and write a number model
F. Multiply a 2 digit number by a 1 or 2 digit number
G. Compare numbers up to 1 billion using less than, greater than, or equal sign

Standards:
CCSS: 4. NBT (2, 5)
Learning Targets Addressed:
Target 2
Target 3

Key Unit Resources
● Everyday Math 4th Edition ● IXL

Assessment Map:

Type	Level	Assessment Detail
Practice	Knowledge	● Journal ● Home Links
Formative	Skills/ Reasoning	● Demonstrate two by two multiplication, estimating sums, and parentheses

	<table><tr><td>Summative</td><td>Product</td><td> - Unit Assessment - Open Response </td></tr></table>
VI. Division; Map Reference Frames; Measures of Angles A. Round numbers to a given place value B. Multiply multi digit numbers and compare the products C. Divide a multidigit number by a 1 digit divisor and express the remainder as a fraction D. Solve division number stories and interpret remainders E. Identify the measures of angles	**Standards:**CCSS: 4.NBT (6) 4.MD (6) **Learning Targets Addressed:** Target 2 Target 3 Target 4 Target 5 **Key Unit Resources** ● Everyday Math 4th Edition ● IXL **Assessment Map:** <table><tr><th>Type</th><th>Level</th><th>Assessment Detail</th></tr><tr><td>Practice</td><td>Knowledge</td><td> - Journal - Home Links </td></tr><tr><td>Formative</td><td>Skills/ Reasoning</td><td> - Problem solve multiplication and division number stories, interpreting remainders - Measure angles </td></tr><tr><td>Summative</td><td>Product</td><td> - Unit Assessment - Open Response </td></tr></table>

VII. Fractions and Their Uses; Chance and Probability

A. Identify, draw, and measure angles
B. Name fractions of regions or collections to find the whole
C. Find the 'fraction of' problems
D. Write equivalent fractions and decimals
E. Order fractions with like numerators and denominators
F. Use relation symbols to compare equivalent fractions from decimals

Standards: CCSS: 4. NF.12, 4.NF.3, 4.NF.4, 4NF.5

Learning Targets Addressed:
Target 1
Target 2
Target 3
Target 4
Target 5

Key Unit Resources
● Everyday Math 4th Edition ● IXL

Assessment Map:

Type	Level	Assessment Detail
Practice	Knowledge	● Journal ● Study Links
Formative	Skills/ Reasoning	● Demonstrate skill in adding, subtracting fractions, changing decimals to fractions, measuring angles ● Comparison of fractions and multiplication and division of decimals
Summative	Product	● Unit Assessment ● Open Response

VIII. Perimeter and Area

A. Add and subtract fractions with unlike denominators

B. Rename fractions as decimals and decimals as fractions

C. Draw a rectangle with given area and perimeter

D. Write a number model to calculate the area of a rectangle

Standards: CCSS: 4. MD1, 4.MD.2, 4.MD.3, 4.G.1, 4NF.4

Learning Targets Addressed:
Target 2
Target 3
Target 4
Target 5

Key Unit Resources
● Everyday Math 4th Edition ● IXL

Assessment Map:

Type	Level	Assessment Detail
Practice	Knowledge	● Journal ● Study Links
Formative	Skills/ Reasoning	● Utilize the formulas for Area & Perimeter ● Demonstrate adding & Subtracting fractions ● Architecture and Design
Summative	Product	● Unit Assessment ● Open Response

IX. Fractions and Decimals

A. Write a number model to calculate area and perimeter of a rectangle and parallelogram.

B. Shade a percent of a 100 grid and write a percent as a fraction and a decimal

C. Solve a 'fraction of' problems

Standards: CCSS: 4.NF.1,5,6 4.MD.2,3 4.OA.3 4.MBT.5,6

Learning Targets Addressed:
Target 1
Target 2
Target 3
Target 4
Target 5

Key Unit Resources
● Everyday Math 4th Edition ● IXL

Assessment Map:

Type	Level	Assessment Detail
Practice	Knowledge	● Journal ● Study Links
Formative	Skills/ Reasoning	● Compare fractions and decimals ● Calculate area and perimeter ● Determine area and perimeter
Summative	Product	● Unit Assessment ● Open Response

X. Reflections and Symmetry

A. Use a transparent mirror to draw a reflection
B. Draw shapes with one, two, or multiple lines of symmetry

Standards: CCSS: 4.NF.4a,b,c 4.NF.5,6 4.MD.1,6 4.G.3

Learning Targets Addressed:
Target 3
Target 4
Target 5

Key Unit Resources
● Everyday Math 4th Edition ● IXL

Assessment Map:

Type	Level	Assessment Detail
Practice	Knowledge	● Journal ● Study Links
Formative	Skills/ Reasoning	● Demonstrate lines of reflection and symmetry
Summative	Product	● Unit Assessment ● Open Response

XI. Weight, Measurement, and Capacity

A. Calculate equivalent units of length
B. Make reasonable estimates of weight

Standards: CCSS: 4.OA.3 4.MD.1,2,3,4

Learning Targets Addressed:
Target 2
Target 3
Target 4
Target 5

Key Unit Resources
● Everyday Math 4th Edition ● IXL

Assessment Map:

Type	Level	Assessment Detail
Practice	Knowledge	● Journal ● Study Links
Formative	Skills/ Reasoning	● Calculate equivalent lengths and reasonable estimates for weight

	<table><tr><td>Summative</td><td>Product</td><td>● Unit Assessment ● Open Response</td></tr></table>
XII. Decimals A. Add and subtract decimals to solve open number sentences B. Compare integers using less than, greater than, and equal C. Order integers from smallest to largest D. Calculate equivalent units of capacity E. Calculate the unit of the item to the nearest cent	**Standards: CCSS: 4.OA.3 4.MBT.3 4.MD.1,2** **Learning Targets Addressed:** Target 1 Target 2 Target 3 Target 5 **Key Unit Resources** ● Everyday Math 4th Edition ● IXL **Assessment Map:** <table><tr><th>Type</th><th>Level</th><th>Assessment Detail</th></tr><tr><td>Practice</td><td>Knowledge</td><td>● Journal ● Study Links</td></tr><tr><td>Formative</td><td>Skills/ Reasoning</td><td>● Add and subtract decimals to solve open number sentences. ● Solve rate problems</td></tr><tr><td>Summative</td><td>Product</td><td>● Unit Assessment ● Open Response</td></tr></table>