Moon Area School District Curriculum Map

Course: Academic Math 5
Grade Level: 5
Content Area: Math
Frequency: Full-Year Course

Big Ideas

1. CHAPTER 1: Understand Place Value
2. CHAPTER 2: Add and Subtract decimals
3. CHAPTER 3:Fluently multiply multi-digit whole numbers
4. CHAPTER 4: Use Models and Strategies to Multiply Decimals
5. CHAPTER 5: Use Models and Strategies to Divide Whole Numbers
6. CHAPTER 6: Use models and Strategies to Divide Decimals
7. CHAPTER 7: Use equivalent Fractions to Add and Subtract Fractions
8. CHAPTER 8: Apply Understanding of Multiplication to Multiply Fractions
9. CHAPTER 9: Apply Understanding of Division to Divide Fractions
10. CHAPTER 10: Represent and interpret data
11. CHAPTER 11: Understand Volume concepts
12. CHAPTER 12: Convert measurements
13. CHAPTER 13: Write and Interpret Numerical Expressions
14. CHAPTER 14: Graph Points on the Coordinate Plane
15. CHAPTER 15: Algebra: Analyze Patterns and Relationships
16. CHAPTER 16: Geometric Measurement: Classify Two-Dimensional Figures

Essential Questions

17. CHAPTER 1: How are whole numbers and decimals written, compared, and ordered?
18. CHAPTER 2: How can sums and differences of decimals be estimated?
19. CHAPTER 2: What are some common procedures doe adding and subtracting decimals?
20. CHAPTER 2: How can sums and differences be found mentally?
21. CHAPTER 3: what are the standard procedures for estimating and finding products of multi-digit numbers?
22. CHAPTER 4: What are some common procedure for estimating and finding products of decimals?
23. CHAPTER 5: what are some common procedures for division and why do they work?
24. CHAPTER 6: what are some common procedures for estimating and finding quotients involving decimals?
25. CHAPTER 7: How can sums and differences of fractions and mixed numbers be estimated?
26. CHAPTER 7: What are some common procedures for adding and subtracting fractions and mixed numbers?
27. CHAPTER 8: What does it mean to multiply whole numbers and fractions?

28. CHAPTER 8: How can multiplication with whole numbers and fractions be shown uisng models and symbols?
29. CHAPTER 9: How are fractions related to division?
30. CHAPTER 9: How can you divide with whole numbers and unit fractions?
31. CHAPTER 10: How can line plots be used to represent data and answer questions?
32. CHAPTER 11: What is the meaning of volume of a solid?
33. CHAPTER 11: How can the volume of a rectangular prism be found?
34. CHAPTER 12: What are customary measurement units, and how are they related?
35. CHAPTER 12: What are metric measurements, and how are they related?
36. CHAPTER 13: How is the value of a numerical expression found?
37. CHAPTER 14: How are points plotted?
38. CHAPTER 14: How are relationships shown on a graph?
39. CHAPTER 15: How can number patterns be analyzed and graphed?
40. CHAPTER 15: How can numbers patterns and graphs be used to solve problems?
41. CHAPTER 16: How can triangles and quadrilaterals be described, classified, and named?

Primary Resource(s) & Technology:

Textbook

Series, IXL online software, Microsoft Teams, Promethean Boards, Student Laptops/iPads

Pennsylvania and/or focus standards referenced at:

www.pdesas.org

www.education.pa.gov

Big Ideas/ EQs	Focus Standard(s)	Assessed Competencies (Key content and skills)	Timeline
1 , 17	**CHAPTER 1** 5.NBT.A.2 5.NBT. A.1 5 NBT. A. 3a 5 NBT. A. 3b CC.2.1.5.B.1 M 5.A-T.1.1.2 M 5.A-T.1.1.1 M 5.A-T.1.1.3 M 5.A-T.1.1.4 M 5.A-T.1.1.5	• Use patterns and properties of multiplication to calculate a product when multiplying by a power of 10 • Use whole number exponents to write powers of 10 • Read and write whole numbers using standard form, expanded form, and number names • Represent decimals to thousandths as fractions and fractions with denominators of 1,000 • Read and write numbers with decimals through thousandths using standard form, expanded form, and number names; identify equivalent decimals • Use place value to compare decimals through thousands • Use place value to round decimals to different places. • Use the structure of the decimal place-value system to solve problems involving patterns	(10-11 days)
2, 18, 19, 20	**CHAPTER 2** 5NBT.B.7 5.NBT.A.4 CC.2.1.5.B.2 M05.A-T.2.1.3 CC.2.1.5.B.1	• Use properties of addition and strategies to solve problems mentally • Use rounding or compatible numbers to estimate sums and differences • Model sums and differences of decimals • Add decimals to hundredths using familiar strategies, such as partial sums • Subtract decimals to hundredths using familiar strategies such as partial differences • Use prior knowledge and equations or bar diagrams to solve problems.	(9-10 days)
3, 21	**CHAPTER 3** 5.NBT.A.2 5.NBT.A.1 5.NBT.B.5 CC.2.1.5.B.2 CC.2.1.5.B.1 M05.A-T.1.1.2 M05.A-T.2.1.1	• Use place value understandings and patterns to mentally multiply whole numbers and powers of 10 • Use rounding and compatible numbers to estimate products • Use place value and the standard algorithm to multiply multi-digit numbers by 1-digit numbers • Use the expanded and standard algorithm to multiply 2-digit by 2-digit numbers. Estimate to check if products are reasonable. • Multiply 3-digit numbers by 2-digit numbers by adding partial products or by using the standard algorithm • Use knowledge about place value and multiplying with 2-digit and 3-digit numbers to multiply with zeros • Use properties and the standard algorithm for multiplication to find the product of multi-digit numbers • Use models and strategies to solve word problems	(12-13 days)

		• Critique the reasoning of others by asking questions, looking for flaws, and using prior knowledge of estimating products	
4, 22	**CHAPTER 4** 5.NBT.A.2 5.NBT.B.7 CC.2.1.5.B.2 CC.2.1.5.B.1 M05.A-T.1.1.2 M05.A-T.2.1.3	• Use knowledge about place value and patterns to find the product of a decimal number and power of 10. • Use rounding and compatible numbers to estimate the product of a decimal and whole number. • Use models to represent multiplying a decimal and a whole number. • Use place value understanding and an algorithm for multiplying whole numbers to multiply a decimal and a whole number. • Use grids to model decimals and find the product of a decimal and a decimal. • Multiply decimals using partial products and models. • Use properties to multiply decimals. • Use number sense and reasoning to place the decimal point in a product. • Use previously learned concepts and skills to represent and solve problems.	(12-13 days)
5, 23	**CHAPTER 5** 5.NBT.B.6 CC..1.5.B.2 M05.A-T.2.1.2	• Use place-value patterns and mental math to find quotients. • Use compatible numbers and place value patterns to estimate quotients. • Use models to find quotients. • Solve division problems using partial quotients. • Use place value and sharing to divide by 2-digit divisors. • Use place value and sharing to divide greater dividends. • Select from different strategies to divide 3- and 4- digit numbers by 2-digit numbers. • Make sense of problems and keep working.	(11 -12 days)
6, 24	**CHAPTER 6** 5.NBT.A.2 5.NBT.B.7 CC.2.1.5.B.1 M05.A-T.2.1.3 CC.2.1.5.B.2 M05.A-T.2.1.3	• Use mental math and place-value patterns to divide a decimal by a power of 10. • Use reasoning and strategies such as rounding and compatible numbers to estimate quotients in problems with decimals. • Use models to help find quotients in problems involving decimals. • Use models to visualize the relationship between division and multiplication to divide decimals by 2-digit numbers. • Use models to divide a decimal by a decimal.	(9-10 days)

		• Use reasoning to solve problems by making sense of quantities and relationships in the situation.	
7, 25, 26	**CHAPTER 7** 5.NF.A.2 5.NF.A.1 CC.2.1.5.C.1 M05.A-F.1.1.1	• Estimate sums and differences of fractions by using the nearest half or whole number. • Find common denominators for fractions with unlike denominators. • Add fractions with unlike denominators using equivalent fractions with a common denominator. • Subtract fractions with unlike denominators. • Write equivalent fractions to add and subtract fractions with unlike denominators. • Estimate sums and differences of fractions and mixed numbers. • Add mixed numbers using models. • Add mixed numbers using equivalent fractions and a common denominator. • Use models to subtract mixed numbers. • Subtract mixed numbers using equivalent fractions and a common denominator. • Add and subtract mixed numbers using equivalent fractions and a common denominator. • Represent a problem situation with a mathematical model.	(14-15 days)
8, 27, 28	**CHAPTER 8** 5.NF.B.4a 5.NF.B.4b 5.NF.B.5a 5.NF.B.5b 5.NF.B.6	• Multiply a fraction by a whole number • Multiply a whole number by a fraction • Multiply fractions and whole numbers • Use models to multiply two fractions • Multiply two fractions • Find the area of a rectangle using fractions and diagrams • Use models, equations, and previously learned strategies to multiply mixed numbers. • Compare the size of the product to the size of one factor without multiplying to consider multiplication as scaling. • Use previously learned knowledge to make sense of problems and persevere in solving them.	(12-13 days)
9, 29, 30	**CHAPTER 9** CC.2.1.5.C.2 M05.A-F.2.1.1 M05.A-F.2.1.4	• Fractions and division • Fractions and mixed numbers as quotients • Use multiplication to Divide • Divide whole numbers by unit fractions • Divide Unit fractions by non-zero whole numbers • Divide whole numbers and unit fractions	(11-12 days)

		• Solve problems using division	
10, 31	**CHAPTER 10** CC.2.4.5.A.2 CC.2.4.5.A.4 M05.D-M.2.1.1 CC.2.1.5.C.1 M05.A-F.1.1.1 CC.2.1.5.C.2	• Analyze line plots • Make line plots • Solve word problems using measurement data • Critique reasoning • Display and Interpret Data: Frequency Tables • Display and Interpret Data: Bar Graphs • Display and Interpret data: Line graphs	(7-8 days)
11, 32, 33	**CHAPTER 11** CC.2.4.5.A.5 Mo5.D-M.3.1.1 M05.D-M.3.1.2	• Model volume • Develop a volume formula • Combine volumes of prisms • Solve word problems using volume •	(8-9 days)
12, 34, 35	**CHAPTER 12** 5.MD.A.1 5.NBT.B.5 5.NBT.B.6 5.NBT.A.2 MP.6 MP.2	• Convert customary units of length • Convert customary units of capacity • Convert customary units of weight • Convert metric units of length • Convert metric units of capacity • Convert metric units of mass • Convert units of time • Solve word problems using measurement conversions • Precision	(12-13 days)
13, 36	**CHAPTER 13** CC.2.2.5.A.1 M05.B-O.1.1.1 M05.B-O.1.1.2	• Evaluate expressions • Write numerical expressions • Interpret Numerical Expressions • Reasoning	(7-8 days)
14, 37, 38	**CHAPTER 14** CC.2.3.5.A.1 M05.C-G.1.1.1 M05.C-G.1.1.2	• The coordinate system • Graph data using ordered pairs • Solve problems using ordered pairs • Reasoning •	(7-8 days)
15, 39, 40	**CHAPTER 15** 5. OA.B.3 5.G.A.2	• Analyze numerical patterns • Use tables to identify relationships between patterns • Analyze patterns, and graph ordered pairs generated from number sequences • Make sense of problems, and persevere in solving them	(7-8 days)
16, 41	**CHAPTER 16**	• Classify triangles by their angles and sides	

	5.G.B.3 5.G.B.4	• Classify quadrilaterals by their properties • Classify quadrilaterals using a hierarchy • Construct arguments about geometric figures	(7-8 days)

TOTAL 155-171 days