Grade: Grade 5
Course: Mathematics
Year: 2023-2024

5th Grade Math Course of Study

Unit: Module 1: Place Value Concepts for Multiplication and Division with Whole Numbers
Essential Questions:
How do you multiply and divide a multi-digit number using the standard algorithm ?
How do you compare numbers to the left and right when comparing values (8,888 - The 8 in the tens is ten times larger than the 8 in the ones)
Big Idea: The digit in the place value to the left is 10 times greater than the number and the digit in the place value to the right is 1/10 the value of the number.
Big Idea When converting a bigger unit to a smaller unit (kilograms to grams) one multiplies. When converting a smaller unit to a bigger unit one divides
Unit Vocabulary: centigram, centiliter, dividend, exponent, exponential form, kiloliter, milligram, milliliter, power of 10, quotient, divisor, remainder, standard algorithm, factor
Verbs: Analyze, Consider, Evaluate

Connection to Vision of a Lakewood Ranger

Creative and Critical Thinking
Growth Mindset
Communication
Collaboration

Suggested Pacing	Content Standards	Learning and Performance Expectations What must students know and be able to do?	Assessment of Learning Options How will we know if they learned this skill?	Resources Options
20 Lessons				
	Topic A : Place Value Concepts for Multiplication and Division with Whole Numbers (6 lessons)			
Lesson 1	5.NBT.1	P V is 10 times more each place to the right and 1/10 to the left.	Exit ticket Less. 1	EMC2 MOD 1 les. 1
Lesson 2	5.NBT.2	X by 10, 100,1000	Exit ticket les 2	EMC2 MOD 1 les. 2
Lesson 3	5.NBT.2	exponents	Exit ticket les 3	EMC2 MOD 1 les. 3
Lesson 4	5.NBT.2	Estimating products	Exit ticket les. 4	EMC2 MOD 1 les. 4
Lesson 5	5.MD.A.1	Converting measurement by using metric conversion	Exit ticket les. 5	EMC2 MOD 1 les. 5
Lesson 6	5.MD.A.1,MP2	Solve multistep word problems using metric system	Exit ticket les. 6 TOPIC A - QUIZ	EMC2 MOD 1 les. 6
	Topic B: Multiplication of Whole Numbers (5 lessons)			
Lesson 7	5.OA.A1, 5.NBT.B.5 AD1, AD2, AD9	Multiply with familiar methods	Exit ticket les. 7	EMC2 MOD 1 les. 7

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Lesson 8	5.OA.A1, 5.NBT.B5, MP8 AD2, AD3, AD9	Multiply 2 and 3 digit #'s by using distributive property	Exit ticket les. 8	EMC2 MOD 1 les. 8
Lesson 9	5.NBT.B.5, MP6, AD9	Multiply 2 and 3 digit #'s by 2 and 3 digit #'s using standard algorithm	Exit ticket 9	EMC2 Mod 1 les. 9
Lesson 10	5.NBT. B.5, MP6, AD9	Multiply 3 and 4 digit #'s by 3 digit #'s by using standard algorithm.	Exit ticket 10	EMC2 Mod 1 les., 10
Lesson 11	5.NBT.B5, MP3 AD9	Multiply 2 multi-digit #'s using s. algorithm	Exit ticket 11 TOPIC B QUIZ	EMC2 Mod 1 les. 11
Topic C: Division of Whole Numbers (5 lessons)				
Lesson 12	5.NBT.B.6, MP7 AD5, AD10, AD11	Divide 2 and 3 digit #'s by multiples of 10	Exit ticket 12	EMC2 Mod 1 les. 12
Lesson 13	5. NBT.B.6, MP7 AD5, AD10, AD11	Divide 2 digit #'s by 2 digit #'s in a problem that results in one digit quotients	Exit ticket 13	EMC2 Mod 1 les. 13
Lesson 14	5.NBT.B.6, MP1 AD5, AD10	Divide 3 digit #'s by 2 digit #'s in problems that result in one digit quotients.	Exit ticket 14	EMC2 Mod 1 - les. 14
Lesson 15	5.NBT.B.6, MP7 AD5, AD10, AD11	Divide 3 digit #'s by 2 digit #'s in problems that result in two digit quotients.	Exit ticket 15	EMC2 Mod 1 - Les. 15
Lesson 16	NBT.B.6, MP7 AD5, AD10,	Divide 4 digit #'s by 2 digit #'s	Exit ticket 16 TOPIC C QUIZ	EMC2 Mod 1 - les 16
Topic D: Multi-Step problems with Whole Numbers (4 Lessons)				
Lesson 17	5.OA.A.1, 5.OA.A.2, MP6 AD1, AD3, AD4	Write, Interpret, and compare numerical expressions	Exit ticket 17	EMC2 Mod 1 - les. 17
Lesson 18	5.OA.A.1, 5.OA.A.2, MP2 AD2, AD3, AD5	Create and solve real world problems for given numerical expressions	Exit ticket 18	EMC2 Mod 1- Lesson 18
Lesson 19	5.OA.A.1, 5.OA.A.2, MP4 AD2, AD3, AD5	Solve multi-step word problems involving multiplication and division	Exit ticket 19	EMC2 Mod 1 - Lesson 19
Lesson 20	5.OA.A.1, 5.OA.A.2, MP1 AD2, AD3,AD5	Solve multi-step word problems involving the four operations.	Exit ticket 20 TOPIC D QUIZ MODULE 1 TEST	EMC2 Mod 1 - Lesson 20

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Level 5: Module 2: Addition and Subtraction with Fractions

Essential Questions: Can students use prior knowledge of fractions to add and subtract fractions and mixed numbers with unlike denominators? Can students interpret a fraction as the result of dividing the numerator by the denominator? Can students interpret data in line plots?

Big Idea: Students will add and subtract fractions and mixed numbers with unlike denominators.

Big Idea: Students will interpret a fraction as the result of dividing the numerator by the denominator.

Big Idea: Students will interpret data on line plots.

Vocabulary:

- New:
  - Minuend- The minuend is the starting value, or the total in a part–total relationship. (Lesson 12)
  - Subtrahend- Subtrahend is the number being subtracted from the starting value, or the part in a part–total relationship. (Lesson 12)
- Familiar: Common denominator, denominator, equivalent fractions, fraction form, mixed number, and numerator
- Academic Verb: Conclude

Connection to Vision of a Lakewood Ranger

Creative and Critical Thinking
Growth Mindset
Communication
Collaboration

Suggested Pacing	**Content Standards**	**Learning and Performance Expectations** What must students know and be able to do?	**Assessment of Learning Options** How will we know if they learned this skill?	**Resources Options**
17 Lessons				
Topic A: Fractions and Division				
Lesson 1	5.NF.B.3, MP7 5.Mod2.AD8, 5.Mod2.AD9, 5.Mod2.AD10	Interpret fractions as division.	Pre-Module 2&3 Assessment Exit Ticket 1	EMC2 M2 L1
Lesson 2	5.NF.B.3, MP5 5.Mod2.AD9, 5.Mod2.AD10	Interpret a fraction as division by writing remainders as fractions.	Exit Ticket 2	EMC2 M2 L2
Lesson 3	5.NF.B.3, MP2 5.Mod2.AD9, 5.Mod2.AD10	Represent fractions as division by using models.	Exit Ticket 3	EMC2 M2 L3
Lesson 4	5.NF, 5.NF.B.3, MP1 5.Mod2.AD1, 5.Mod2.AD9, 5.Mod2.AD10	Solve word problems involving division and fractions.	Exit Ticket 4 Topic A Quiz 1, 2, and 3	EMC2 M2 L4
Topic B: Addition and Subtraction of Fractions by Making Like Units				
Lesson 5	5.NF.A, MP6	Add and subtract fractions with related units by using pictorial models.	Exit Ticket 5	EMC2 M2 L5

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	5.Mod2.AD2, 5.Mod2.AD3			
Lesson 6	5.NF.A, MP7 5.Mod2.AD2	Add and subtract fractions with related units by using area models to rename fractions.	Exit Ticket 6	EMC2 M2 L6
Lesson 7	5.NF.A, 5.NF.A.1, MP5 5.Mod2.AD2, 5.Mod2.AD4	Add and subtract fractions with related units by finding equivalent fractions numerically.	Exit Ticket 7	EMC2 M2 L7
Lesson 8	5.NF.A, 5.NF.A.1, MP8 5.Mod2.AD3, 5.Mod2.AD4	Add and subtract fractions with unrelated units by finding equivalent fractions pictorially.	Exit Ticket 8	EMC2 M2 L8
Lesson 9	5.NF.A, 5.NF.A.1, MP5 5.Mod2.AD2, 5.Mod2.AD4	Add and subtract fractions with unrelated units by finding equivalent fractions numerically.	Exit Ticket 9 Topic B Quiz 1, 2, and 3	EMC2 M2 L9
Topic C: Addition and Subtraction of Fractions, Whole Numbers, and Mixed Numbers				
Lesson 10	5.NF.A.1, 5.NF.A.2, MP5 5.Mod2.AD4, 5.Mod2.AD7	Add whole numbers and mixed numbers and add mixed numbers with related units.	Exit Ticket 10	EMC2 M2 L10
Lesson 11	5.NF.A.1, 5.NF.A.2, MP2 5.Mod2.AD4, 5.Mod2.AD5, 5.Mod2.AD6	Add mixed numbers with unrelated units.	Exit Ticket 11	EMC2 M2 L11
Lesson 12	5.NF.A, 5.NF.A.1, 5.NF.A.2, MP6 5.Mod2.AD2, 5.Mod2.AD4, 5.Mod2.AD7	Subtract whole numbers from mixed numbers and mixed numbers from whole numbers.	Exit Ticket 12	EMC2 M2 L12
Lesson 13	5.NF.A.1, 5.NF.A.2, MP7 5.Mod2.AD4, 5.Mod2.AD7	Subtract mixed numbers from mixed numbers with related units.	Exit Ticket 13	EMC2 M2 L13
Lesson 14	5.NF.A.1, 5.NF.A.2, MP4 5.Mod2.AD4, 5.Mod2.AD5, 5.Mod2.AD6	Subtract mixed numbers from mixed numbers with unrelated units.	Exit Ticket 14 Topic C Quiz 1, 2, and 3	EMC2 M2 L14
Topic D: Problem Solving and Line Plots with Fractional Measurements				
Lesson 15	5.MD.B.2, MP6 5.Mod2.AD11	Represent data on a line plot.	Exit Ticket 15	EMC2 M2 L15
Lesson 16	5.MD.B.2, MP3 5.Mod2.AD11	Solve problems by using data from a line plot.	Exit Ticket 16	EMC2 M2 L16
Lesson 17	5.NF.A.2, 5.MD.B.2, MP5 5.Mod2.AD5, 5.Mod2.AD11	Solve problems by equally redistributing a total amount.	Exit Ticket 17 Topic D Quiz 1, 2, and 3 Module Assessment 1 and 2 Benchmark Session 1 and 2	EMC2 M2 L17

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Unit: Module 3: Multiplication and Division with Fractions
Essential Questions:
How do you find a fraction of a whole number ?
How do you solve an Order of Operations question?
Big Idea: Finding a fraction of a whole number is the same as finding the product of a fraction and a whole number
Big Idea: To complete order of operations, follow PEMDAS (Parenthesis, Exponents, Multiplication and Division left to right, and Addition and Subtraction left to right) in that order
Vocabulary: Mixed number, whole number, product, ounce, cup, pint, pound, gallon, convert, numerator, denominator,
Verbs: Demonstrate

Connection to Vision of a Lakewood Ranger

Creative and Critical Thinking
Growth Mindset
Communication
Collaboration

Suggested Pacing	Content Standards	Learning and Performance Expectations What must students know and be able to do?	Assessment of Learning Options How will we know if they learned this skill?	Resources Options
22 lessons				
		Topic A : Multiplication of a Whole Number By a Fraction (6 lessons)		
Lesson 1	NF.B.4.a, NF.B.5.b, MP8 AD7, AD9	Find fractions of a set with arrays	Exit slip 1	EMC2 Mod 3, lesson 1
Lesson2	NF.B.4.a, NF.B.5.a, MP5 AD7, AD9	Interpret fractions as division to find fractions of a set with tape diagrams and # lines	Exit slip 2	EMC2 Mod 3, lesson 2
Lesson 3	NF.B.4, NF.B.4a, NF.5.b, MP5 AD6, AD7, AD8	Multiply a whole # by a fraction less than 1	Exit slip 3	EMC2 Mod 3, lesson 3
Lesson 4	NF.B.4.a, NF.B.5.a, MP2 AD7, AD8,	Multiply a whole # by a fraction	Exit slip 4	EMC2 Mod 3, lesson 4
Lesson 5	NF.B.4.a, NF.B.5.b, MD.A.1, MP6 AD7, AD9, AD14	Convert large measurement into smaller measurement	Exit slip 5	EMC2 Mod 3, lesson 5
Lesson 6	NF.B.4.a, NF.B.5.b, MD.A.1, MP7 AD7, AD9,AD14	Convert smaller measurement into larger measurement	Exit slip 6 TOPIC A QUIZ	EMC2 Mod 3, lesson 6
		Topic B: Multiplication of Fractions (5 lessons)		
Lesson 7	NF.B.4.a, NF.B.5a, NF.B.5.b, MP6 AD7, AD8, AD9	Multiply fractions less than 1 by unit fractions pictorially	Exit slip 7	EMC2, Mod 3, lesson 7
Lesson 8	NF.B.4.a, NF.B.5.a, NF.B.5.b, MP3 AD7, AD8, AD9	Multiply fractions less than 1 pictorially	Exit slip 8	EMC2 Mod 3 lesson 8

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Lesson 9	NF.B.4, NF.B.5.a, NF.B.5.b, MP8 AD6, AD8, AD9	Multiply fractions by unit fractions by making simpler problems	Exit slip 9	EMC2 Mod 3 lesson 9
Lesson 10	NF.B.4, NF.B.5.a and .b, MP7 AD6, AD8, AD9	Multiply fractions greater than 1 by fractions.	Exit slip 10	EMC2 Mod 3 lesson 10
Lesson 11	NF.B.4.a, NF.B.5a and b, MP3 AD7, AD8, AD9	Multiply fractions	Exit slip 11 TOPIC B QUIZ	EMC2 Mod 3 lesson 11
Topic C: Division with a Unit Fraction and a Whole Number (6 lessons)				
Lesson 12	5.OA.A.2, NF.B.7.b, NF.B.7.c, MP1 AD3, AD12, AD13	Divide a nonzero whole # by a unit fraction to find the # of groups	Exit slip 12	EMC2 Mod 3 lesson 12
Lesson 13	NF.B.7.b, NF.B.7.c, MP2 AD12, AD13	Divide a nonzero whole number by a unit fraction to find the size of the group	Exit slip 13	EMC2, Mod 3 lesson 13
Lesson14	NF.B.7.a, NF.B.7.c, MP4 AD11, AD13	Divide a unit fraction by a nonzero whole number	Exit slip 14	EMC2 Mod 3 lesson 14
Lesson 15	NF.B.7.a, NF.B.7.b/c, MP3 AD11, AD12, AD13	Divide by whole numbers and unit fractions	Exit slip 15	EMC2 Mod 3 lesson 15
Lesson 16	OA.A..2, NF.B.7.a, 5.NF.B.7.b, MP7, AD4, AD11, AD12	Reason about the size of quotients of whole #'s and unit fractions and whole #'s	Exit slip 16	EMC2 Mod 3 lesson 16
Lesson 17	NF.B.6, NF.B.7.c, MP1 AD10, AD13	Solve word problems involving fractions with multiplication and division	Exit slip 17 TOPIC C QUIZ	EMC2 Mod 3 lesson 17
Topic D : Multi-Step Problems with Fractions (5 Lessons)				
Lesson 18	OA.A.1, OA.A.2, MP6 AD2, AD3, AD4	Compare and evaluate expressions with parentheses	Exit Slip 18	EMC2 Mod 3 lesson 18
Lesson 19	NF.B.7.a, NF.B.7.b/c, MP2 AD11, AD12, AD13	Create and solve one step word problems involving fractions	Exit Slip 19	EMC2 Mod 3 lesson 19
Lesson 20	NF.B..c, MP4 AD5, AD13	Solve word problems with fractions and write equations with parentheses	Exit slip 20	EMC2 Mod 3 lesson 20
Lesson 21	NF.B.6, NF.B.7.c, MP4 AD5,AD10, AD13	Solve multi-step word problems involving fractions	Exit slip 21	EMC2 MOD 3 Lesson 21
Lesson 22	OA.A.1, MP6 AD1, AD2	Evaluate expressions involving nested grouping symbols	Exit Slip 22 TOPIC D QUIZ MODULE 3 TEST	EMC2 Mod 3 Lesson 22

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Level 5: Module 4: Place Value Concepts for Decimal Operations

Essential Questions: Can students relate their understanding of whole numbers and fractions to decimals?

- Big Idea: Students understand decimal concepts including describing place value relationships, rounding, comparing, adding, subtracting, multiplying, dividing, and converting measurements.

Vocabulary:

- New:
  - Inequality- An inequality is a statement that compares two expressions by using > or <. (Lesson 29)
  - Thousandths- Thousandths are a place value unit. 1 one can be decomposed into 1,000 thousandths. (Lesson 1)
- Familiar: Associative property of multiplication, bundle, exchange, rename, commutative property of multiplication, compare, distributive property, expanded form, exponent, hundredths, long division, power of 10, round, tenths
- Academic Verbs: Module 4 does not introduce any academic verbs from the grade 5 list.

Connection to Vision of a Lakewood Ranger

Creative and Critical Thinking
Growth Mindset
Communication
Collaboration
Global Awareness/Citizen

Suggested Pacing	Content Standards	Learning and Performance Expectations What must students know and be able to do?	Assessment of Learning Options How will we know if they learned this skill?	Resources Options
30 Lessons				
Topic A: Understanding Decimal Numbers with Place Value and Fraction Thinking				
Lesson 1	5.NBT.A, 5.NBT.A.1, 5.NBT.A.3.a, MP8 5.Mod4.AD5, 5.Mod4.AD6, 5.Mod4.AD9	Model and relate decimal place value units to thousandths.	Module 4&5 Pre-Module Assessment Exit Ticket 1	EMC2 M4 L1
Lesson 2	5.NBT.A, 5.NBT.A.1, 5.NBT.A.3.a, MP7 5.Mod4.AD5, 5.Mod4.AD6, 5.Mod4.AD9	Represent thousandths as a place value unit.	Exit Ticket 2	EMC2 M4 L2
Lesson 3	5.NBT.A, 5.NBT.A.1, 5.NBT.A.3.a, MP7 5.Mod4.AD5, 5.Mod4.AD6, 5.Mod4.AD9	Represent decimal numbers to the thousandths place in different forms.	Exit Ticket 3	EMC2 M4 L3
Lesson 4	5.NBT.A.1, MP6 5.Mod4.AD6	Relate the values of digits in a decimal number by using place value understanding.	Exit Ticket 4	EMC2 M4 L4
Lesson 5	5.NBT.A.2, MP8 5.Mod4.AD7	Multiply and divide decimal numbers by powers of 10.	Exit Ticket 5	EMC2 M4 L5
Lesson 6	5.NBT.A.3, 5.NBT.A.3.b, MP5 5.Mod4.AD8, 5.Mod4.AD10	Compare decimal numbers to the thousandths place.	Exit Ticket 6	EMC2 M4 L6

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Lesson 7	5.NBT.A.4, MP6 5.Mod4.AD11	Round decimal numbers to the nearest one, tenth, or hundredth.	Exit Ticket 7	EMC2 M4 L7
Lesson 8	5.NBT.A.4, MP3 5.Mod4.AD11	Round decimal numbers to any place value unit.	Exit Ticket 8 Topic A Quiz 1, 2, and 3	EMC2 M4 L8
Topic B: Addition and Subtraction of Decimal Numbers				
Lesson 9	5.NBT.B, 5.NBT.B.7, MP5 5.Mod4.AD12, 5.Mod4.AD14, 5.Mod4.AD19	Add decimal numbers by using different methods.	Exit Ticket 9	EMC2 M4 L9
Lesson 10	5.NBT.B.7, MP1 5.Mod4.AD14, 5.Mod4.AD18, 5.Mod4.AD19	Add decimal numbers by using place value understanding.	Exit Ticket 10	EMC2 M4 L10
Lesson 11	5.NBT.B.7, MP7 5.Mod4.AD15, 5.Mod4.AD18, 5.Mod4.AD19	Subtract decimal numbers by using different methods.	Exit Ticket 11	EMC2 M4 L11
Lesson 12	5.NBT.B, 5.NBT.B.7, MP5 5.Mod4.AD12, 5.Mod4.AD15, 5.Mod4.AD19	Subtract decimal numbers by using place value understanding.	Exit Ticket 12	EMC2 M4 L12
Lesson 13	5.NBT.B, MP6 5.Mod4.AD13	Solve word problems involving addition and subtraction of decimal numbers and fractions.	Exit Ticket 13 Topic B Quiz 1, 2, and 3	EMC2 M4 L13
Topic C: Multiplication of Decimal Numbers				
Lesson 14	5.NBT.B.7, MP7 5.Mod4.AD16, 5.Mod4.AD18, 5.Mod4.AD19	Multiply decimal numbers to hundredths by one-digit whole numbers by using different models.	Exit Ticket 14	EMC2 M4 L14
Lesson 15	5.NBT.B, 5.NBT.B.7, MP1 5.Mod4.AD12, 5.Mod4.AD16, 5.Mod4.AD19	Multiply decimal numbers to hundredths by one-digit whole numbers and multiples of 10, 100, or 1,000 by using different written methods.	Exit Ticket 15	EMC2 M4 L15
Lesson 16	5.NBT.B, 5.NBT.B.7, MP8 5.Mod4.AD13, 5.Mod4.AD16, 5.Mod4.AD18	Multiply decimal numbers to hundredths by two- digit whole numbers by using area models and vertical form.	Exit Ticket 16	EMC2 M4 L16
Lesson 17	5.NBT.B, 5.NBT.B.7, MP5 5.Mod4.AD13, 5.Mod4.AD16, 5.Mod4.AD19	Multiply decimal numbers to hundredths by two- digit whole numbers by using different methods.	Exit Ticket 17	EMC2 M4 L17
Lesson 18	5.NBT.B.7, MP 5.Mod4.AD16, 5.Mod4.AD18, 5.Mod4.AD19	Relate decimal-number multiplication to fraction multiplication.	Exit Ticket 18	EMC2 M4 L18
Lesson 19	5.NBT.B, 5.NBT.B.7, MP7 5.Mod4.AD12, 5.Mod4.AD16, 5.Mod4.AD19	Multiply a decimal number by a decimal number.	Exit Ticket 19 Topic C Quiz 1, 2, and 3	EMC2 M4 L19
Topic D: Division of Decimal Numbers				
Lesson 20	5.NBT.B, 5.NBT.B.7, MP7 5.Mod4.AD12, 5.Mod4.AD17, 5.Mod4.AD18	Divide decimal numbers to hundredths by one-digit whole numbers and multiples of 10, 100, or 1,000 by using unit form and place value understanding.	Exit Ticket 20	EMC2 M4 L20

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Lesson 21	5.NBT.B.7, MP3 5.Mod4.AD17, 5.Mod4.AD19	Divide decimal numbers to hundredths by one-digit whole numbers and multiples of 10, 100, or 1,000 by using place value understanding and vertical form.	Exit Ticket 21	EMC2 M4 L21
Lesson 22	5.NBT.B, 5.NBT.B.7, MP5 5.Mod4.AD13, 5.Mod4.AD17, 5.Mod4.AD19	Divide decimal numbers to hundredths by two-digit whole numbers.	Exit Ticket 22	EMC2 M4 L22
Lesson 23	5.NBT.B, 5.NBT.B.7, MP8 5.Mod4.AD12, 5.Mod4.AD17, 5.Mod4.AD19	Relate division by 0.1 and 0.01 to division by a unit fraction.	Exit Ticket 23	EMC2 M4 L23
Lesson 24	5.NBT.B, 5.NBT.B.7, MP2 5.Mod4.AD13, 5.Mod4.AD17, 5.Mod4.AD19	Divide decimal numbers by decimal numbers, resulting in whole-number quotients.	Exit Ticket 24	EMC2 M4 L24
Lesson 25	5.NBT.B, 5.NBT.B.7, MP1 5.Mod4.AD12, 5.Mod4.AD17, 5.Mod4.AD19	Divide decimal numbers by decimal numbers, resulting in decimal-number quotients.	Exit Ticket 25 Topic D Quiz 1, 2, and 3	EMC2 M4 L25
Topic E: Applications of Decimals				
Lesson 26 **optional*	5.MD.A.1, MP3 5.Mod4.AD20	Solve a real-world problem involving metric measurements.	Exit Ticket 26	EMC2 M4 L26
Lesson 27	.MD.A.1, MP6 5.Mod4.AD20	Convert metric measurements involving decimals.	Exit Ticket 27	EMC2 M4 L27
Lesson 28	5.MD.A.1, MP4 5.Mod4.AD20	Convert customary measurements involving decimals.	Exit Ticket 28	EMC2 M4 L28
Lesson 29	5.OA.A.1, 5.OA.A.2, MP6 5.Mod4.AD1, 5.Mod4.AD2, 5.Mod4.AD4	Interpret, evaluate, and compare numerical expressions involving decimals.	Exit Ticket 29	EMC2 M4 L29
Lesson 30	5.OA.A.1, 5.OA.A.2, MP2 5.Mod4.AD1, 5.Mod4.AD2, 5.Mod4.AD3	Create and solve real- world problems for given numerical expressions involving decimals.	Exit Ticket 30 Topic E Quiz 1, 2, and 3 Module Assessment 1 and 2 Benchmark Session 1 and 2	EMC2 M4 L30

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Level 5: Module 5: Addition and Multiplication with Area and Volume
Essential Questions: How do you find the area of squares and rectangles? How do you find Volume of cubes and rectangular prisms?
Big Idea To find the area of a square or rectangle one multiplies length x width or counts the unit squares inside the figure
Big Idea To find the volume of a cube or rectangular prism one multiplies length x width x height or count the squares inside the figure
Vocabulary: base, composite figures, cubic centimeters, cubic inch, kite, midpoint, plane, property, right rectangular prism, unit cube, volume, area

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Creative and Critical Thinking
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Collaboration

Suggested Pacing	Content Standards	Learning and Performance Expectations What must students know and be able to do?	Assessment of Learning Options How will we know if they learned this skill?	Resources Options
28 lesson				
Topic A : Drawing Analysis and Classification of Two Dimensional Figures (7 lessons)				
Lesson 1	5.G.B.3, 5.G.B.4, MP8 AD13, AD14	Analyze hierarchies and identify properties of quadrilaterals	Exit Slip 1	EMC2 lesson 1
Lesson 2	5.G.B.3, 5.G.B.4, MP7 AD13, AD14	Classify trapezoids and their properties	Exit Slip 2	EMC2 lesson 2
Lesson 3	5.G.B.3, 5.G.B.4, MP3 AD13, AD14	Classify parallelograms based on their properties	Exit Slip 3	EMC2 lesson 3
Lesson 4	5.G.B.3, 5.G.B.4, MP6 AD13, AD14	Classify Rectangles and rhombuses based on their properties	Exit Slip 4	EMC2 lesson 4
Lesson 5	5.G.B.3, 5.G.B.4, MP6 AD13, AD14	Classify kites and squares based on their properties	Exit Slip 5	EMC2 lesson 5
Lesson 6	5.G.B.3, 5.G.B.4, MP1 AD13, AD14	Identify quadrilaterals from given properties	Exit Slip 6	EMC2 lesson 6
Lesson 7	5.G.B.3, 5.G.B.4, MP7 AD13, AD14	Classify quadrilaterals on a hierarchy based on properties	Exit Slip 7 TOPIC A QUIZ	EMC2 lesson 7
Topic B : Areas of Rectangular Figures with Fraction Side Lengths (8 Lessons)				
Lesson 8	5.NF.B.4, MP7 AD2	Finding areas of squares with fraction side lengths	Exit Slip 8	EMC2 lesson 8
Lesson 9	5.NF.B.4.b, MP5	Organize, Count, and represent a collection of square tiles	Exit Slip 9	EMC2 lesson 9

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	AD2			
Lesson 10	5.NF.B.5.b, MP7 AD2	Find the area of a rectangle with a fraction side length	Exit Slip 10	EMC2 lesson 10
Lesson 11	5.NF.B.4.b, MP8 AD3	Find areas of rectangles with fraction side lengths by multiplication	Exit Slip 11	EMC2 lesson 11
Lesson 12	5.NF.B.4.b, MP5 AD1, AD4	Multiply mixed numbers	Exit Slip 12	EMC2 lesson 12
Lesson 13	5.NF.B.4.b, MP7 AD3	Solve problems involving areas of figures with mixed number side lengths	Exit Slip 13	EMC2 lesson 13
Lesson 14	5.NF.B.4.b, 5.NF.B.6, MP1 AD3, AD5	Solve real-world problems involving areas of figures with mixed number side lengths	Exit Slip 14	EMC2 lesson 14
Lesson 15	NF.B.6, MP2 AD5	Solve multi-step word problems involving multiplication of mixed numbers	Exit Slip 15 TOPIC B QUIZ	EMC2 lesson 15
Topic C : Volume Concepts (6 Lessons)				
Lesson 16	5.MD.C.3a/b AD6	Identify attributes and properties of right rectangular prisms	Exit Slip 16	EMC2 lesson 16
Lesson 17	5.MD.C.3a/b, 5MD.C.4, MD2 AD6, AD7	Find the volume of rectangular prisms by packing unit cubes and counting	Exit Slip 17	EMC2 lesson 17
Lesson 18	5.MD.C.4, MP3 AD7	Find the volume of rectangular prisms by packing with improvised units.	Exit Slip 18	EMC2 lesson 18
Lesson 19	5.MD.C.3, 5MD.C.3.a/b, MP8 AD6, AD7	Compose and decompose right rectangular prisms to find their volume by using layers	Exit Slip 19	EMC2 lesson 19
Lesson 20	5.MD.C.3, 5.MD.C.3a/b, MP2	Interpret volume as filling	Exit Slip 20	EMC2 lesson 20
Lesson 21	5 MD.C.3a/b, MD.C.4, MP2 AD6, AD7	Relate volumes of solids and liquid volume	Exit Slip 21 TOPIC C QUIZ	EMC2 lesson 21
Topic D : Volume and the Operations of Multiplication and Division(7 Lessons)				
Lesson 22	5.MD.C.5 a/b, MP7 AD9, AD11, AD8	Find the volumes of right rectangular prisms by using the area of the base	Exit Slip 22	EMC2 lesson 22
Lesson 23	5.MD.C.5.a, 5.MD.C.5.b AD9, AD10, AD11	Find volumes of right rectangular prisms by multiplying the edge lengths	Exit Slip 23	EMC2 lesson 23
Lesson 24	5.MD.C, MP2 AD8, AD12	Solve word problems involving volumes of right rectangular prisms	Exit Slip 24	EMC2 lesson 24

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Lesson 25	5.MD.C.b/c, MD2 AD11, AD12	Find the volumes of solid figures composed of right rectangular prisms	Exit Slip 25	EMC2 lesson 25
Lesson 26	5.MD.C.5b/c, MD2 AD11, AD12	Solve word problems involving perimeter, area, and volume	Exit Slip 26	EMC2 lesson 26
Lesson 27	5.MD.C.b/c, MP4 AD11, AD12	Apply concepts and formulas of volume to design a sculpture by using rectangular prisms part 1	Exit Slip 27	EMC2 lesson 27
Lesson 28	5.MD.C.5.b/c, MP3 AD11, AD12	Apply concepts and formulas of volume to design a sculpture by using right rectangular prisms part 2	Exit Slip 28 TOPIC D QUIZ MODULE 5 TEST	EMC2 lesson 28

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LAKEWOOD CITY SCHOOLS

Level 5: Module 6: Foundations to Geometry in the Coordinate Plane

Essential Questions: Can students construct a coordinate plane, identify the location of points in the plane, and identify patterns in ordered pairs that create lines? Can students draw quadrilaterals in the plane? Can students use a plane to represent data?

Big Idea: Students will be able to construct a coordinate plane, identify the location of points in the plane, and identify patterns in ordered pairs that create lines.

Big Idea: Students will be able to draw quadrilaterals in a plane.

Big Idea: Students will be able to use a plane to represent data.

Vocabulary:

- New:
  - Axes- Axes are the pair of perpendicular number lines that create a coordinate system. Axes refers to both the x-axis and the y-axis together. (Lesson 2)
  - Coordinate- A coordinate is a number used to identify the location of a point. (Lesson 1)
  - Coordinate Plane- A coordinate plane is a plane with a coordinate system used to describe locations of points in the plane. A coordinate plane has perpendicular axes that intersect at 0. (Lesson 2)
  - Coordinate system- A coordinate system is a system that uses one or more numbers, or coordinates, to identify the location of a point. (Lesson 1)
  - Ordered pair- An ordered pair is a pair of two coordinates that describe the location of a point in the coordinate plane. An ordered pair is written (x, y), where x represents the point's x-coordinate and y represents the point's y-coordinate. (Lesson 2)
  - Origin- The origin is the point where the x- and y-axes intersect. The origin is located at the point (0, 0). (Lesson 2)
  - X-axis- The x-axis is the horizontal number line in a coordinate system. (Lesson 2)
  - X-coordinate- The x-coordinate is the value that describes a point's horizontal distance from the y-axis. (Lesson 2)
  - Y-axis- The y-axis is the vertical number line in a coordinate system. (Lesson 2)
  - Y-coordinate- The y-coordinate is the value that describes a point's vertical distance from the x-axis. (Lesson 2
- Familiar: Acute angle, angle, area, endpoint, figure, graph, horizontal line, interval, length, line, line of symmetry, line segment, midpoint, number line, obtuse, operation, parallel, parallelogram, pattern, perimeter, perpendicular, plane, point, polygon, quadrilateral, ray, rectangle, scale, square, symmetry, term, tick mark, trapezoid, vertex, and vertical line.
- Academic Verbs: Module 6 does not introduce any academic verbs from the grade 5 list.

Connection to Vision of a Lakewood Ranger

Creative and Critical Thinking
Growth Mindset
Communication
Collaboration

Suggested Pacing	Content Standards	Learning and Performance Expectations What must students know and be able to do?	Assessment of Learning Options How will we know if they learned this skill?	Resources Options
		Topic A: Coordinate Systems		
Lesson 1	5.G.A.1, MP6 5.Mod6.AD3	Construct a coordinate system on a line.	Pre-Module 6 Assessment Exit Ticket 1	EMC2 M6 L1
Lesson 2	5.G.A.1, MP7 5.Mod6.AD3	Construct a coordinate system in a plane.	Exit Ticket 2	EMC2 M6 L2
Lesson 3	5.G.A.1, MP1 5.Mod6.AD3	Identify and plot points by using ordered pairs.	Exit Ticket 3	EMC2 M6 L3

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Lesson 4	5.G.A.2, MP2 5.Mod6.AD4, 5.Mod6.AD5	Describe the distance and direction between points in the coordinate plane.	Exit Ticket 4 Topic A Quiz 1, 2, and 3	EMC2 M6 L4
Topic B: Patterns in the Coordinate Plane				
Lesson 5	5.G.A.2, MP8 5.Mod6.AD5	Identify properties of horizontal and vertical lines.	Exit Ticket 5	EMC2 M6 L5
Lesson 6	5.G.A.2, MP6 5.Mod6.AD5	Use properties of horizontal and vertical lines to solve problems.	Exit Ticket 6	EMC2 M6 L6
Lesson 7	5.OA.B.3, 5.G.A.2, MP7 5.Mod6.AD1, 5.Mod6.AD2, 5.Mod6.AD5	Generate number patterns to form ordered pairs.	Exit Ticket 7	EMC2 M6 L7
Lesson 8	5.OA.B.3, 5.G.A.2, MP8 5.Mod6.AD1, 5.Mod6.AD2, 5.Mod6.AD5	Identify addition and subtraction relationships between corresponding terms in number patterns.	Exit Ticket 8	EMC2 M6 L8
Lesson 9	5.OA.B.3, 5.G.A.2, MP8 5.Mod6.AD1, 5.Mod6.AD2, 5.Mod6.AD5	Identify multiplication and division relationships between corresponding terms in number patterns.	Exit Ticket 9	EMC2 M6 L9
Lesson 10 **Optional*	MP7	Identify mixed- operation relationships between corresponding terms in number patterns.	Exit Ticket 10 Topic B Quiz 1, 2, and 3	EMC2 M6 L10
Topic C: Solve Mathematical Problems in the Coordinate Plane				
Lesson 11	5.OA.B.3, 5.G.A.2, MP3 5.Mod6.AD2, 5.Mod6.AD5	Draw lines in the coordinate plane and identify points on the lines.	Exit Ticket 11	EMC2 M6 L11
Lesson 12	5.G.A.2, 5.G.B.4, MP7 5.Mod5.AD14, 5.Mod6.AD5	Graph and classify quadrilaterals in the coordinate plane.	Exit Ticket 12	EMC2 M6 L12
Lesson 13	5.G.A.2, MP1 5.Mod6.AD5	Draw symmetric figures in the coordinate plane.	Exit Ticket 13	EMC2 M6 L13
Lesson 14	5.G.A.2, MP5 5.Mod6.AD5	Solve mathematical problems with rectangles in the coordinate plane.	Exit Ticket 14	EMC2 M6 L14
Lesson 15	5.G.A.2, 5.NF.B.4.b, MP3 5.Mod5.AD3, 5.Mod6.AD5	Use the coordinate plane to reason about perimeters and areas of rectangles.	Exit Ticket 15 Topic C Quiz 1, 2, and 3	EMC2 M6 L15
Topic D: Solve Real-World Problems with the Coordinate Plane				
Lesson 16	5.G.A.2, MP3 5.Mod6.AD4, 5.Mod6.AD5	Interpret graphs that represent real-world situations.	Exit Ticket 16	EMC2 M6 L16
Lesson 17	5.G.A.2, MP2 5.Mod6.AD4	Plot data in the coordinate plane and analyze relationships.	Exit Ticket 17	EMC2 M6 L17

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Lesson 18	5.G.A.2, MP2 5.Mod6.AD5	Interpret line graphs.	Exit Ticket 18	EMC2 M6 L18
Lesson 19 **Optional*	MP5	Reason about visual patterns by using tables and graphs.	Exit Ticket 19	EMC2 M6 L19
Lesson 20	5.OA.B.3, 5.G.A.2, MP4 5.Mod6.AD1, 5.Mod6.AD2, 5.Mod6.AD4	Reason about patterns in real-world situations.	Exit Ticket 20 Topic D Quiz 1, 2, and 3 Module Assessment 1 and 2 Benchmark Session 1 and 2	EMC2 M6 L20