

	Essentials Question	Content	Skills	Assessment	Vocabulary
Cycle 1	(Units 1 and 2)	A. Number Sense	A. Choose numbers and appropriate methods and tools to calculate		<u>Data About Us</u> <u>Unit 1</u> (Lessons 1, 2,3,5 and 6)
	A. How do estimates help us solve problems?	B. Algebra	A. Distinguish between estimate and exact answer		Bar graph Horizontal axis Value Variable Vertical Axis Categorical Variable Numerical Variable Average Median Fixed Variable Point Graph
	B. How do variables affect data?	C. Geometry	A. Estimate quantities		
	B. and E. What different ways can data be displayed?	D. Measurement	B. and E. Using and identifying numerical and categorical variables		
	B. and E. How can we use patterns to make predictions?	E. Analysis and Probability	B. and E. Naming values and variables		
	B and E. How can we use patterns to make predictions?		B. and E. Translating between graphs and real world events		
	C and D. How are lines formed differently?		B. and E. Making and Interpreting Bar Graphs, Point Graphs		<u>Geometric Investigations: A</u> <u>Baseline Assessment Unit</u> <u>Unit 2</u> (Lessons 1, 2, 4, 6, and 7)
	E. How do we measure?		B and E. Using patterns in tables and graphs to make predictions		Area Length Width Categorical Numerical Point Graph Variable Square Inch Unit of measurement Best-Fit Line Perimeter Helipad Rectangle Square Acute Angle Obtuse Angle Right Angle Side Vertex Degree Equilateral Triangle Hexagon Quadrilateral Rhombus Square Trapezoid
			C and D. Estimate angle measurements using benchmarks		
			C and D. Find the perimeter and of a polygon		
		C and D. Identify acute, obtuse, and right angles			
		D. Measure in length in inches			
		E. Collecting, organizing, graphing and analyzing data			
		E. Investigating the concept of averages			
		E. Averaging and finding the median			

Cycle 2

<p>(Unit 3, 4 and 5.1 and 5.2)</p> <p>A. How does knowing your facts help solve problems?</p> <p>A and B. How can numbers be arranged?</p> <p>A and B. How do you represent multiplication problems?</p> <p>A. How can numbers be combined or separated?</p> <p>A. How do we classify numbers?</p> <p>B. How can we show number relationships?</p> <p>E. How do lines help us read graphs?</p> <p>E. How can we interpret data differently?</p>	<p>A. Number Sense</p> <p>B. Algebra</p> <p>C. Geometry</p> <p>D. Measurement</p> <p>E. Analysis and Probability</p>	<p>A. Maintain fluency with multiplication and division facts</p> <p>A. Write the four number sentences in fact families</p> <p>A. Name the value of a digit</p> <p>A. Understand place value</p> <p>A. Add and subtract multi-digit numbers through computation and problem solving</p> <p>A. Estimate sums and differences</p> <p>A. Reason to find estimates or exact answers</p> <p>A. Explore negative and positive numbers</p> <p>A. Choose appropriate methods and tools to calculate</p> <p>A. Solve problems using multiplication and division</p> <p>A. Solve and identify problems including multiples, factors, primes, squares</p> <p>A. and B. Use exponents to represent numbers differently</p> <p>A. Create factor trees to find the prime factorization of a number</p> <p>B. Determine patterns to solve problems</p> <p>B. Apply turnaround facts to multiply</p> <p>B. and E. Make and interpret point graphs</p> <p>B. and E. Draw and interpret best fit lines</p> <p>B. and E. Apply interpolation and extrapolation to estimate and predict from a data set</p> <p>B. and E. Translate between graphs and real world events</p> <p>C. Create arrays to identify prime and square numbers</p> <p>E. Find the median and mean</p>	<p>Place Value</p> <p>Addition and Subtraction Quiz</p>	<p><u>Numbers and Number Operations</u></p> <p style="text-align: center;"><u>Unit 3</u> (Lessons 1, 3, 4, 5, 6 and 7)</p> <p>Dividend Division Sentence Divisor Fact family Factors Products Quotient Turn-around fact Base-ten Pieces Bits/ Cubes Fewest Pieces Rule Place Value Shinnies/ Longs Flats/ Flats Packs Negative Numbers Positive Numbers</p> <p style="text-align: center;"><u>Products And Factors</u> <u>Unit 4</u> (Lessons 1, 2, 3, 5, and 6)</p> <p>Array Composite numbers Even numbers Exponents Multiple Odd Numbers Prime Numbers Square Numbers Factor Product Factor Tree Prime Factor Prime Factorization</p> <p style="text-align: center;"><u>Using Data to Predict</u> <u>Unit 5</u> (Lesson 1- 5 and 7)</p> <p>Best- Fit Line Average Mean Median Circumference</p>
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Cycle 3

(Continue unit 5, Unit 6, and 7.1 and 7.2)

A. How do estimates help us solve problems?

A. How do estimates help us solve problems?

A. How do we represent numbers?

B. What do problem solvers do?

B and E. How can we use patterns to make predictions?

B. and E. What different ways can data be displayed?

E. How do we measure?

E. How can we interpret data differently?

A. Number Sense

B. Algebra

C. Geometry

D. Measurement

E. Analysis and Probability

A. Exploring large numbers: doubles and powers of ten

A. Round using convenient numbers

A. Estimate sums and differences of large numbers

A and B. Use exponents to represent numbers differently

A. and B. Solving multistep word problems

A. Read, write, compare and order numbers to the millions

B. Identify and interpret number patterns

B. and E. Use patterns to make predictions and solve problems

B. and E. Make and interpret point graphs

E. Find the median and mean

Using Data to Predict

Unit 5

(Lesson 1- 5 and 7)

Best- Fit Line

Average

Mean

Median

Circumference

Place Value Patterns

Unit 6

(Lesson 1-7)

Millions

Ones

Period

Place Value

Thousands

Rounding

Estimate

Pattern In Multiplications

Unit 7

(Lesson 1,2,3,4,5,6,7,8)

Operations

Order of Operations

Divisible

Factor

Multiple

Remainder

Product

Estimation

Convenient Numbers

Cycle 4

(Continue unit 7 and unit 9)

A. How do we solve math problems?

A. How do numbers relate in multiplication?

A and B. How do you represent multiplication problems?

A. How do estimates help us solve problems?

A. What does math fluency mean to you?

A. What do good math students do?

A. How are shapes classified?

C and D. How are lines formed?

E. How do we measure?

A. Number Sense

B. Algebra

C. Geometry

D. Measurement

A. Use order of operations

A. Identify and describe number patterns

A. Explore the inverse relationship of multiplication and division

A. Choose appropriate methods and tools to calculate

A. Use factors and multiples to solve problems

A. Understand place value

A. Use divisibility rules

A. Represent multiplication with base-ten pieces

A. Multiply numbers using papers and pencil method

A. Estimate sums, differences, and products

A. Solve problems using multiplication

A. Use convenient numbers to round and estimate

A. Understand multiplication as repeated addition

B. Using unknown in number sentences

C. Identifying and describing number patterns

B. Using word problems

C. Identify angles

C. Identify and describe different lines

C. Identify and use notation for different lines, polygons, and angles

C. Identify and describe line and rotational symmetry

C and D. Measure angles with a protractor

C. Draw rectangular solids

C. Identify and describe 3d shapes

C. Translate between a rectangular prism and net

D. Measure area in sq centimeters, the volume of prisms, and length in cm

D. Measure length and convert between dm, cm, mm, and m

D. Choose an appropriate unit of measurement

Pattern In Multiplications

Unit 7

(Lesson 1,2,3,4,5,6,7,8)

Operations

Order of Operations

Divisible

Factor

Multiple

Remainder

Product

Estimation

Convenient Numbers

Shapes And Solids

Unit 9

Lesson 1,2,3,5,6,8

Intersect

Line

Line Segment

Parallel Line

Perpendicular Line

Parallelogram

Point

Quadrilateral

Ray

Polygon

Protector

Vertex

Rotation

Hexagon

Line of Symmetry

Reflective

Rhombus

Trapezoid

Triangle

Dimensions

Regular

Sides

Edge

Face

Hexagonal Prism

Net

Prism

Rectangular Prism

Cycle 5

(Unit 10, 11 and 12)

A. How do numbers relate in multiplication?

A. What does it mean to be a fraction?

A. How can we find relationships in fractions?

A. How do we represent fractions?

A. What does math fluency mean to you?

A. Why do we have decimals?

A. How are decimals represented?

A. How do estimates help us solve problems?

A. and B. How do we read a math problem?

B. and E. What different ways can data be interpreted?

A. Number Sense

B. Algebra

C. Geometry

D. Measurement

E. Analysis and Probability

A. Represent decimals using number charts and number lines

A. Develop number sense to the hundredths

A. Read and write decimals to the hundredths

A. Translate between different representations of decimals and multiplication (pictorals, symbolic, concrete)

A. Compare and order decimals

A. Use fractions and decimals to represent the same quantity

A and E. Find the average

A. Count by tenths and hundredths

A. Estimate products

A. Represent multiplication with base ten pieces

A. Multiply multi-digit numbers using paper and pencil

A. Multiplying and dividing numbers that end in zero

A. Interpret and use fractions

A. Add and subtract, compare, and order fractions

A. Represent fractions in different ways

A. Define numerator and denominator

A. Identify the units when a fractional part is given

B. Use unknowns in multiplication sentences

B. Use numerical variables

B and E. Translate between graphs and real world events

B and E. Use patterns and data to make predictions and solve problems

B and E. Make and interpret point graphs

B and E. Draw and interpret best fit lines

B. Investigate how a change in one variable relates to a change in a second variable

Using Decimals

Unit 10

(Lesson 1,2,3,4,5,6)

Decimal
Centimeter
Decimeter
Hundredth
Meter
Millimeter
Nearest Tenth
Common Fractions
Decimal Fractions
Denominator
Numerator
Extrapolate
Fixed Variable
Interpolate
Manipulated Variable
Responding Variable
Variable

Multiplication

Unit 11

(Lesson 1,2,3,4,7)

Multiplicands (factors)
All partials method

Exploring Fractions

Unit 12

(Lesson 1,2,3,4,5,6,7)

Denominator
Equivalent Fraction
Fraction
Numerator
Like Denominator
Hexagon
Rhombus
Trapezoid

Cycle 6

(Unit 13, 14, 15)

A. What is math fluency?

A. What is division?

A. How do we interpret remainders?

E. How do we use probability to make decisions?

E. What information do graphs give us?

E. How are predictions made?

E. How are patterns represented?

A. Number Sense

B. Algebra

C. Geometry

D. Measurement

E. Analysis and Probability

A. Represent division with base-ten pieces.

A. Dividing with 1-digit divisors using paper and pencil

A. Interpreting remainders

A. Solving problems using addition, subtraction, multiplication and division

A. Estimate products and quotients

A and E. Find the average

A. Choose appropriate methods and tools to calculate

A. Understand place value

A. Multiply and divide with zero

A. Choose to find an exact or estimate answer

A. Use division symbols

A. Investigate square numbers

A and E. Represent probabilities on a number line

A and E. Express probabilities as fractions

A and E. Find the probability of an event

A, B, C. Identify, extend and make generalizations about number patterns

A. and E. Use number and geometric patterns to make predictions and solve problems

C and D. Dividing circles into equal parts by measuring with a protractor

C. Use geometric concepts and skills to solve problems

B. Use numerical variables

B and E. Make and interpret bar graphs

B and E. Translate between graphs and real world events

B. Represent patterns and functions as input/output tables, words and graphs

D. Measure length in centimeters

E. Define probability

E. Collect, organize, and analyze random data

E. Describe events as certain, likely, equally likely, or not likely

E. Explore probability involved in number cubes and spinners

E. Use probabilities to make predictions

E. Identify patterns that emerge

Division
Unit 13
Lesson: 2,3,4

Survey
Binning
Dividend
Forgiving Method for Division
Quotient
Remainder
Divisor

Chancy Prediction: An Introduction to the Probability
Unit 14
Lesson

Certain
Impossible
Likely
Equally likely
Probability
Unlikely
Fair number cube
Spinner
Random Event
Fair Spinner

Developing Formulas with Geometry
Unit 15
(Lesson 1, 2, 3, 4)

Acute Triangle
Area
Base
Congruent
Formula
Height (Altitude)
Hypotenuse of a right triangle
Length
Obtuse Triangle
Perimeter
Perpendicular
Right Triangle
Width

