Math Grade 5 Unit 5
Canterbury Public Schools

Subject	Math
Grade Level	5
Unit Title	Place Value Patterns and Decimal Operations
Unit Goals	Students build from place value understanding in grade 4 to recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. Round, compare, and order numbers Read, write, compare and round decimals to the thousandths. Apply the understanding of decimals and of whole-number operations to add, subtract, multiply, and divide decimal numbers. Fluently add, subtract, multiply and divide multi-digit decimals using the standard algorithm for each operation.. Section A Numbers to Thousandths Compare, round and order decimals through the thousandths place based on the value of the digits in each place. Read, write, and represent decimals to the thousandths place, including in expanded form. Understand the relationship between one tenth, one hundredth, and one thousandth Section B Add and Subtract Decimals Add and Subtract decimals to the hundredths using strategies based on place value Section C Multiply Decimals Multiply decimal with products resulting in the hundredths using place value reasoning and properties of operations Section D Divide Decimals Divide decimals with quotients resulting in the hundredths using place value reasoning and properties of operations
Pacing (# of weeks)	4 to 6 weeks
Standards	5.NBT.A, 5.NBT.A.1, 5.NBT.A.3, 5.NBT.A.3.a, 5.NBT.A.3.b, 5.NBT.A.4, 5.OA.A
Content/Conceptual	There are 10 tenths in a whole

Knowledge (know)	There are 10 hundredths in a tenth There are 10 thousandths in a hundredth There are different ways to write a decimal number. Decimals may be represented in diagrams, expanded form, fractions, and words Numbers can be converted into different forms
Skills (be able to do)	Write numbers as fractions and decimals Represent fractions and decimals in different ways Make sense of each form of a decimal Represent a decimal using weights and balance Estimate and round numbers Order numbers from least to greatest Round decimals to different place value and order them Estimate and add to find a value Multiply whole numbers by tenths and hundredths Find the value of quotients where the divisor is less than 1 and where the dividend is large enough that drawing a complete diagram is cumbersome.apply all four operations to complex decimal numbers Find sums, differences, and products of decimals
Essential Questions	How can tenths, hundredths, and thousandths be represented? How can we write decimals to the thousandths place and represent the decimals with diagrams? How is shading diagrams helpful in identifying fractions and decimals? How can a diagram represent a number? How can we use expanded form to represent decimals to the thousandths place? How can we represent numbers in different forms (fractions, decimals)? How do operations with fractions and decimals help us solve real-world problems? How can we compare and order fractions and decimals? How do place value patterns help us understand decimal numbers and perform operations with them? What strategies can we use to add and subtract decimal numbers accurately? How do we multiply and divide decimals, and how do the place values affect these operations? In what ways are decimal operations similar to or different from whole number operations? How can recognizing decimal place value patterns help us solve real-world problems involving measurements, money, or other applications?
Enduring Understandings	There are 10 tenths in a whole There are 10 hundredths in a tenth There are 10 thousandths in a hundredth There are different ways to write a decimal number.

	You can use place value strategies to add and subtract decimals and find a value Fractions and decimals are two representations of rational numbers. Understanding their equivalence and how to perform operations with them helps solve problems in various real-life situations. **Place value relationships** allow us to understand the value of digits in decimal numbers and recognize patterns in numbers to the thousandths place. **Decimal operations** are extensions of whole number operations, and the rules for adding, subtracting, multiplying, and dividing decimals are based on the place value of the digits involved. **Understanding place value** is crucial when performing decimal operations, as it helps maintain accuracy and efficiency in calculations. **Patterns in numbers** can help predict and explain mathematical relationships in both whole numbers and decimals. The ability to perform **decimal operations** is essential in real-world problem-solving, such as in measurements, money, and other practical applications. **Key Concept**: The relationship between fractions and decimals is key to understanding their values in different contexts, and the operations of addition, subtraction, multiplication, and division can be performed on both fractions and decimals.
Vocabulary	tenths, hundredths, thousandths,
Common Learning Experiences	PLC.Lesson 7,Activity 1 Gold Doubloons Centers PLC: Lesson 11, Activity 2, Target Numbers : Add tenths and hundredths Centers PLC:Lesson 20, Activity 1, Products of Tenths Centers PLC: Lesson 22, Activity 1, Patterns in Dividing by Decimal Units Centers Warm-ups and cool -downs Activities by section
Assessments	cool downs, quizzes, end of unit test, classwork,
Resources	Graph paper grids, cubes, chart paper
Strategies	Represent decimals on gridded area diagrams

	Illustrate the structure of the number in its expanded form Use number lines to represent decimals and to compare, order, and round Use diagrams to support reasoning Use the relationship between multiplication and division and the idea of equal groups to make sense of division of decimals Use equivalent expressions to find quotients Number Talks Number lines and tick marks Notice and Wonder