Math Grade 5
Unit 3
Canterbury Public Schools

Subject	Math
Grade Level	5
Unit Title	Multiplying and Dividing Fractions
Goals	Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction Interpret multiplication as scaling Solve real-world problems involving multiplication of fraction and mixed numbers Find the product of two fractions, divide a whole number by a unit fraction and divide a unit fraction by a whole number Draw diagrams that represent a unit fraction multiplied by another unit fraction in context Find the product of 2 unit fractions Reason about the size of quotients in division problems Section A Fraction Multiplication Recognize that *a/b x c/d = axc/bxd a*nd use this generalization to multiply fractions numerically Represent and describe multiplication of a fraction by a fraction by using area concepts Section B Fraction division Divide a unit fraction by a whole number using while-number division concepts Divide a whole number by a unit fraction using whole-number division concepts Section C Problem Solving with Fractions Solve problems involving fraction multiplication and division
Pacing (# of weeks)	6 weeks
Standards	5.NF.B.4, 5.NF.B.5, 5.NF.b.6, 5.NF.B.7
Content/Conceptual Knowledge (know)	Represent fraction multiplication and division using models, number lines, and equations Strategies for solving word problems involving multiplication and division of fractions The relationship between multiplication and division when working with fractions

Skills (be able to do)	Multiply fractions using area models, number lines, and algorithms Divide fractions using visual representations and equations Solve word problems involving multiplication and division of fractions Interpret scaling and understand its effect on multiplication and division of fractions
Essential Questions	How does multiplying fractions relate to multiplication of whole numbers? Why does multiplying a fraction less than one result in a smaller product? How can division of a fraction be visualized? When is it useful to multiply or divide a fraction in real life?
Enduring Understandings	Multiplication of fractions involves finding a part of a part Division of fraction can be understood as creating equal groups or determining how many groups fit into a whole Fraction operations are useful in real=world contexts such a cooking, measurement, and problem solving
Vocabulary	Fractions, area, rectangle, fractional side lengths, denominator, whole, extend, numerically, describe, area concepts
Common Learning Experiences	Hands on activities such as cutting paper strips to model multiplication and division of fractions Small groups and fraction tiles to model fraction operations Direct instruction and guided practice Collaborative learning activities, peer teaching, problem solving stations Game based reinforcement Centers Number talks Warm - up and cool-downs Notice and Wonder Use area diagrams to depict a fraction/ interpret diagrams showing a fraction of a fraction Activities related to sections Multiply fractions Practice problems Use area diagrams PLC:.Lesson 3, Activity 1, Notice Patterns in Expressions PLC: Lesson 12 Activity 2 , Priya's Work PLC: Lesson 17, Info Gap: Tiles
Assessments	Performance task: cooking with fractions- follow a recipe that requires multiplying and dividing fractions to adjust serving sizes Fraction art- create a visual model that demonstrates multiplication and division of fractions Checkpoints- represent and describe multiplication of a fraction by a fraction using area concepts.

	Show reasoning Solve problems involving fraction multiplication and division Real- world problem solving Fraction relay - students complete fraction operations in teams, justifying their strategies using visual models Exit tickets, math journals, formative quizzes. Unit assessment
Resources	Fraction tiles, number lines, model templates, digital tools, task cards, journals Learning centers, number cubes, colored counters,
Strategies	Provide manipulations and visual models for concrete representations Challenge problems for advanced learners Sentence stems Present explanation in multiple formats Use tape diagrams Use area diagrams Which One Doesn't Belong conversations and thinking (compare and contrast)