Grade 6 Section Math Unit 4 Canterbury Public Schools

| Subject | Math |
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| Grade Level | 6 |
| Unit Title | Dividing Fraction |
| Unit Goals | Dividing Fractions Making sense of Division Comprehend the terms"dividend" and "divisor" in a division problem Explain how to estimate quotients by comparing the size of the dividend and divisor Generalize about the size of a quotient. Meanings of Fraction Division How Many Groups? Coordinate multiplication equations and pattern block diagrams in which the yellow hexagon represents one whole Create a diagram to represent and solve a problem asking "How many groups?" in which the divisor is aunty fraction, and explain the solution method Algorithm for Fraction Division Dividing by unit and non-unit fractions Interpret and critique explanations of how to divide by a fraction Use a tape diagram to represent dividing by a non-unit fraction a/b and explain why this produces the same result as multiplying the number by b and dividing by a Use a tape diagram to represent dividing by a unit fraction 1/b and explain why this is the same as multiplying by b Fractions in lengths. Areas, and Volumes Fractional Lengths Use multiplication and division of fractions to solve geometric problems. Solve problems about fractional lengths Apply dividing by fractions to calculate the side length of a rectangle, given its area and the other side length Coordinate diagrams and equations that represent the area of a rectangle with fractional side lengths |

| Pacing (# of weeks) | 6 - 8 weeks |
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| Standards | 6.NS.A.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions |
| Content/Conceptual Knowledge (know) | The meaning of division with whole numbers and how it extends to fractions How to use visual representations to solve division problems The rule for dividing by a fraction (multiply the reciprocal) |
| Skills (be able to do) | Interpret and solve p problems involving division of fractions Use visual models to represent division of fractions Explain their reasoning in solving fraction problems, both orally and in writing Apply fraction division to real-world and mathematical situations Divide a number by a non-unit fractiona/b by reasoning with the numerator and denominator, which are whole numbers Divide a number by a unit fraction 1/b by reasoning with the denominator, which is a whole number Find the quotient of two fractions Describe and apply a rule to divide numbers by any fraction Use division and multiplication to solve problems involving areas of rectangles with fractional side lengths |
| Essential Questions | What does it mean to divide by fractions? How can visual models help us understand division of fractions? Why is dividing by a fraction the same as multiplying by its reciprocal? When is it helpful to use estimation or a model to solve a fraction problem? |
| Enduring Understandings | Division of fractions can be understood through real-world contexts and visual models. Dividing fractions is the process of determining how many groups of one quantity fit into another The relationship between multiplication and division helps us make sense of fraction division. Models as number lines, tape diagrams, and area models can help conceptualize fraction division The size of the divisor affects the quotient |
| Vocabulary | Quotient, dividend, divisor, reciprocal, fraction, unit fraction, visual model, number line, tape diagram, unknown, equal sized, relationship, times as, fraction of, reciprocal, assumption |
| Common Learning Experiences | Engage with contexts- explore real-life scenarios to contextualize fraction division Use visual models - draw or use tools to model dividing fractions with rectangles, number lines, and diagrams Explore multiply by the reciprocal through connections to models and reasoning Math talks, partner problem-solving, Classroom activities and lessons |

| Assessments | Tasks, exit tickets, formative checks, warm ups and cool downs, end of unit tests, mid unit assessments |
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| Resources | ¹ / ₂ inch cubes, ¹ / ₄ inch cubes, measuring tapes, pattern blocks,rulers and straightedges |
| Strategies | Turn and talk, math chats, hands on - real world applications ,Poll the Class, Notice and Wonder, Number talk |