**﻿﻿Module 1 -   
Place Value and Decimal Fractions**﻿﻿  
In Module 1, students’ understanding of the patterns in the base ten system are extended from Grade 4’s   
work with place value of multi-digit whole numbers and decimals to hundredths to   
the thousandths place.  In Grade 5, students deepen their knowledge through   
a more generalized understanding of the relationships between and among adjacent   
places on the place value chart, e.g., 1 tenth times any digit on the place   
value chart moves it one place value to the right.  Toward the module’s end   
students apply these new understandings as they reason about and perform decimal   
operations through the hundredths place.

   
﻿﻿**Module   
2 - Multi-Digit Whole Number and Decimal Fraction Operations**﻿﻿  
In Module 2 students apply patterns of the base ten system  to mental strategies and a sequential   
study of multiplication via area diagrams and the distributive property leading   
to fluency with the standard algorithm.  Students move from whole numbers   
to multiplication with decimals, again using place value as a guide to reason   
and make estimations about products. Multiplication is explored as a method for   
expressing equivalent measures in both whole number and decimal forms.  A   
similar sequence for division begins concretely with number disks as an   
introduction to division with multi-digit divisors and leads student to divide   
multi-digit whole number and decimal dividends by two-digit divisors using a   
vertical written method.  In addition, students evaluate and write   
expressions, recording their calculations using the associative property and   
parentheses.  Students apply the work of the module to solve multi-step   
word problems using multi-digit multiplication and division with unknowns   
representing either the group size or number of groups.  An emphasis on the   
reasonableness of both products and quotients, interpretation of remainders and   
reasoning about the placement of decimals draws on skills learned throughout the   
module, including refining knowledge of place value, rounding, and   
estimation.  
  
  
**Module 3 -   
Addition and Subtraction of Fractions**  
In Module 3, students' understanding of addition and subtraction of fractions extends from earlier work   
with fraction equivalence and decimals. This module marks a significant shift   
away from the elementary grades' centrality of base ten units to the study and   
use of the full set of fractional units from Grade 5 forward, especially as   
applied to algebra.  
  
**Module 4 -   
Multiplication and Division of Fractions and Decimal Fractions**  
Grade 5’s Module 4 extends student understanding of fraction operations to multiplication and division of   
both fractions and decimal fractions.  Work proceeds from interpretation of   
line plots which include fractional measurements to interpreting fractions as   
division and reasoning about finding fractions of sets through fraction by whole   
number multiplication.  The module proceeds to fraction by fraction   
multiplication in both fraction and decimal forms.  An understanding of   
multiplication as scaling and multiplication by n/n as multiplication by 1   
allows students to reason about products and convert fractions to decimals and   
vice versa.  Students are introduced to the work of division with fractions   
and decimal fractions.  Division cases are limited to division of whole   
numbers by unit fractions and unit fractions by whole numbers.  Decimal   
fraction divisors are introduced and equivalent fraction and place value   
thinking allow student to reason about the size of quotients, calculate   
quotients and sensibly place decimals in quotients.  Throughout the module   
students are asked to reason about these important concepts by interpreting   
numerical expressions which include fraction and decimal operations and by   
persevering in solving real-world, multistep problems which include all fraction   
operations supported by the use of tape diagrams.  
  
**Module 5 -   
Addition and Multiplication with Volume and Area**  
In this 25-day module, students work with two- and three-dimensional figures.  Volume is introduced to   
students through concrete exploration of cubic units and culminates with the   
development of the volume formula for right rectangular prisms.  The second   
half of the module turns to extending students’ understanding of two-dimensional   
figures.  Students combine prior knowledge of area with newly acquired   
knowledge of fraction multiplication to determine the area of rectangular   
figures with fractional side lengths.  They then engage in hands-on   
construction of two-dimensional shapes, developing a foundation for classifying   
the shapes by reasoning about their attributes.  This module fills a gap   
between Grade 4’s work with two-dimensional figures and Grade 6’s work with   
volume and area.  
  
**Module 6 - Problem   
Solving with the Coordinate Plane**  
In this 40-day module, students develop a coordinate system for the first quadrant of the coordinate plane and   
use it to solve problems.  Students use the familiar number line as an   
introduction to the idea of a coordinate, and they construct two perpendicular   
number lines to create a coordinate system on the plane.  Students see that   
just as points on the line can be located by their distance from 0, the plane’s   
coordinate system can be used to locate and plot points using two   
coordinates.  They then use the coordinate system to explore relationships   
between points, ordered pairs, patterns, lines and, more abstractly, the rules   
that generate them.  This study culminates in an exploration of the   
coordinate plane in real world applications.