

**Combined Curriculum Document
5th Grade - Mathematics**

<p>Big Idea: Number Properties and Operations Whole number sense and addition and subtraction are key concepts and skills developed in early childhood. Students build on their number sense and counting sense to develop multiplication and division. They move flexibly and fluently through basic number facts, operations and representations. Their understanding of the base-10 number system expands to include decimals. They examine various meanings and models of fractions. They explore data, perform measurements and examine patterns as part of the development process for number and operations, using other mathematics strands to enrich number. Elementary number encompasses computational fluency with whole numbers, relationships between decimals and fractions and techniques for reasonable estimations.</p> <p>Academic Expectations 2.7 Students understand number concepts and use numbers appropriately and accurately. 2.8 Students understand various mathematical procedures and use them appropriately and accurately.</p>		
Program of Studies: Understandings	Program of Studies: Skills and Concepts	Related Core Content for Assessment
<p>MA-5-NPO-U-1 Students will understand that numbers, ways of representing numbers, relationships between numbers and number systems are means of representing real-world quantities.</p>	<p>MA-5-NPO-S-NS1 Students will read, write, model, order, compare (using relative magnitude) and apply multiple representations of whole numbers.</p> <p>MA-5-NPO-S-NS2 Students will compare and apply the relative sizes of common and mixed fractions.</p> <p>MA-5-NPO-S-NS3 Students will investigate multiple representations of equivalent fractions (e.g., $\frac{1}{2} = \frac{3}{6}$, $1\frac{1}{2} = \frac{3}{2}$) with manipulatives, drawings and fractional notation.</p> <p>MA-5-NPO-S-NS4 Students will explore the use of simple ratios to describe problem situations.</p> <p>MA-5-NPO-S-PNO1 Students will use factors to determine prime and composite numbers.</p>	<p>MA-05-1.1.1 Students will:</p> <ul style="list-style-type: none"> • apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols) to represent whole numbers (0 to 99,999,999); • apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, symbols) to describe commonly-used fractions, mixed numbers and decimals through thousandths; • apply these numbers to represent real-world problems and • explain how the base-10 number system relates to place value. <p align="right">DOK 2</p> <p><i>MA-05-1.1.2</i> <i>Students will read, write and rename whole numbers, fractions and decimals, and apply to real-world and mathematical problems.</i></p> <p>MA-05-1.1.3</p>