



**Hardin County Schools Combined Curriculum Guide  
Mathematics -- Fifth Grade – Number Properties and Operations  
DRAFT**

Strategies & Activities	Resources	Common Assessments
	<b>Essential Questions</b>	<b>Higher Order Questions</b>

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POS Understandings	MA-5-NPO-U-2 Students will understand that meanings of and relationships among operations provide tools necessary to solve realistic problems encountered in everyday life.	9 Weeks Taught	1 2 <b>3</b> 4	
POS Skills & Concepts	Date(s) Taught	Core Content for Assessment	Objective	Essential Vocabulary
<p><b>MA-5-NPO-S-NS4</b> Students will explore the use of simple ratios to describe problem situations.</p> <p><b>MA-5-NPO-S-NS5</b> Students will explore, investigate, compare, relate and apply relationships among whole numbers, fractions, decimals and percents.</p> <p><b>MA-5-NPO-S-NS6</b> Students will read, write, identify and compare decimals through ten-thousandths.</p> <p><b>MA-5-NPO-S-NO1</b> Students will develop and apply computational procedures to add, subtract, multiply and divide whole numbers using basic facts and technology as appropriate.</p> <p><b>MA-5-NPO-S-NO2</b> Students will add and subtract fractions with common denominators using manipulatives or symbolic notation.</p> <p><b>MA-5-NPO-S-NO3</b> Students will add and subtract decimals through one-thousandths using manipulatives or symbolic notation.</p> <p><b>MA-5-NPO-S-NO4</b> Students will extend multiplication to include one decimal place.</p> <p><b>MA-5-NPO-S-NO5</b> Students will explore the effects of operations on numbers.</p> <p><b>MA-5-NPO-S-PNO4</b> Students will use properties of numbers for written and mental computation (e.g., combine commutative and associative properties to rearrange multiplication exercises such as <math>4 \times (7 \times 5)</math> which can be rearranged as <math>(4 \times 5) \times 7</math> to simplify the multiplication).</p>		<p><b>MA-05-1.3.1</b> <b>Students will analyze real-world problems to identify appropriate representations using mathematical operations, and will apply operations to solve real-world problems with the following constraints:</b></p> <ul style="list-style-type: none"> <li>▪ add, subtract, multiply, and divide whole numbers (less than 100,000,000), using technology where appropriate;</li> <li>▪ add and subtract fractions with like denominators through 16, with sums less than or equal to one and</li> <li>▪ add and subtract decimals through hundredths.</li> </ul> <p style="text-align: right;"><b>DOK 2</b></p>	I can add and subtract fractions with denominators.	Numerator Denominator

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POS Understandings	<b>MA-5-NPO-U-3</b> Students will understand that computing fluently and making reasonable estimates increases the ability to solve realistic problems encountered in everyday life.		9 Weeks Taught	1 2 <b>3</b> 4
POS Skills & Concepts	Date(s) Taught	Core Content for Assessment	Objective	Essential Vocabulary
<b>MA-5-NPO-S-E1</b> Students will explore appropriate estimation procedures for different situations.  <b>MA-5-NPO-S-E2</b> Students will apply and explain appropriate strategies for estimating quantities of objects and computational results.		<b>MA-05-1.2.1</b> <b>Students will apply and describe appropriate strategies for estimating quantities of objects and computational results in real-world problems.</b>  <div style="text-align: right;"><b>DOK 2</b></div>	I can estimate sums and differences of fractions.	Estimate
Strategies & Activities		Resources	Common Assessments	
		Essential Questions	Higher Order Questions	