

Grade Four HLC Learning Progressions

Multiplicative Reasoning

Grade Four HLC

Multiply and divide within 1000 within context and with equations.

September

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Grade Four Learning Progressions

June

Students must use models to build understanding along this trajectory and interact with a variety of contexts for multiplication and division. Models will continue to support students' ability to unitize–understand a group or collection of items represents "one." (For example, one group of 5 consists of 5 individual items but is classified as one group.)

Counting by Equal Groups (Unitizing) to Extend Multiplicative Understanding





Operations: Multiplication and Division

Students must use models to build understanding along this trajectory and interact with a variety of contexts for multiplication and division. Models should support students developing understanding of the magnitude of digits in their place values. In Grades 3 and 4, place value understanding is multiplicative: 245 = 2(100) + 4(10) + 5(1) Students also use relational thinking when composing, decomposing and recomposing.

**Students are maintaining and using their fact strategies to solve basic facts through 100 within context and with equations.

Multiplication - Composition and Decomposition

Students derive strategies through the use of area models, decomposition of numbers, and relational thinking with known facts.





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Properties of Multiplication (These properties are investigated throughout the year with different numbers and problem situations. The sequence of how the properties appear below does not suggest the order in which to explore them. Many times the properties can be explored simultaneously with student work.)





Division - Composition and Decomposition (Students model both partitive and quotitive situations)



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Composing and Decomposing Using Base Ten Units and Place Value - 1s, 10s, 100s, 1000s (Students must use models to build understanding along this trajectory. Models should support students developing understanding of the magnitude of digits in their place values.)



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