

## Critical Areas for Grade 5 – Page 1 of 4

| In Grade 5, instructional time should focus on three critical areas:  | Cluster Headings | How do the cluster headings help clarify the concepts in the critical areas? | How does the content compare with what you are already teaching?<br><u>Green</u> : similar<br><u>Yellow</u> : could be easily added<br><u>Red</u> : new and I would need support |
|---|------------------|--|--|
| <b>Critical Area 1: Developing fluency with addition and subtraction of fractions, and developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions).</b><br>Students apply their understanding of fractions and fraction models to represent the addition and subtraction of fractions with unlike denominators as equivalent calculations with like denominators. They develop fluency in calculating sums and differences of fractions, and make reasonable estimates of them. Students also use the meaning of fractions, of multiplication and division, and the relationship between multiplication and division to understand and explain why the procedures for multiplying and dividing fractions make sense. (Note: this is limited to the case of dividing unit fractions by whole numbers and whole numbers by unit fractions.) |                  |  |  |
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|  | <i>Cluster Headings</i> | <i>How do the cluster headings help clarify the concepts in the critical areas?</i> | <i>How does the content compare with what you are already teaching?</i><br><i>Green: similar</i><br><i>Yellow: could be easily added</i><br><i>Red: new and I would need support</i> |
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| <b>Critical Area 2: Extending division to 2-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations.</b><br>Students develop understanding of why division procedures work based on the meaning of base-ten numerals and properties of operations. They finalize fluency with multi-digit addition, subtraction, multiplication, and division. They apply their understandings of models for decimals, decimal notation, and properties of operations to add and subtract decimals to hundredths. They develop fluency in these computations, and make reasonable estimates of their results. Students use the relationship between decimals and fractions, as well as the relationship between finite decimals and whole numbers (i.e., a finite decimal multiplied by an appropriate power of 10 is a whole number), to understand and explain why the procedures for multiplying and dividing finite decimals make sense. They compute products and quotients of decimals to hundredths efficiently and accurately. |                         |   |  |
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|  | <i>Cluster Headings</i> | <i>How do the cluster headings help clarify the concepts in the critical areas?</i> | <i>How does the content compare with what you are already teaching?</i><br><i><u>Green</u>: similar</i><br><i><u>Yellow</u>: could be easily added</i><br><i><u>Red</u>: new and I would need support</i> |
|--|-------------------------|---|---|
| <b>Critical Area 3: Developing understanding of volume.</b><br>Students recognize volume as an attribute of three-dimensional space. They understand that volume can be measured by finding the total number of same-size units of volume required to fill the space without gaps or overlaps. They understand that a 1-unit by 1-unit by 1-unit cube is the standard unit for measuring volume. They select appropriate units, strategies, and tools for solving problems that involve estimating and measuring volume. They decompose three-dimensional shapes and find volumes of right rectangular prisms by viewing them as decomposed into layers of arrays of cubes. They measure necessary attributes of shapes in order to determine volumes to solve real world and mathematical problems. |                         |   |   |
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## Cluster Headings for Grade 5 – Page 4 of 4

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| 5.A Write and interpret numerical expressions.  | 5.G Convert like measurement units within a given measurement system.   |
| 5.B Analyze patterns and relationships.   | 5.H Represent and interpret data.   |
| 5.C Understand the place value system.  | 5.I Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition. |
| 5.D Perform operations with multi-digit whole numbers and with decimals to hundredths.                        | 5.J Graph points on the coordinate plane to solve real-world and mathematical problems.                       |
| 5.E Use equivalent fractions as a strategy to add and subtract fractions.                                     | 5.K Geometric measurement: understand concepts of angle and measure angles.                                   |
| 5.F Apply and extend previous understandings of multiplication and division to multiply and divide fractions. |   |