This document shows where students and teachers should spend the large majority of their time in order to meet the expectations of the Standards.

Not all content in a given grade is emphasized equally in the Standards. Some clusters require greater emphasis than others based on the depth of the ideas, the time that they take to master, and/or their importance to future mathematics or the demands of college and career readiness. More time in these areas is also necessary for students to meet the Standards for Mathematical Practice.

To say that some things have greater emphasis is not to say that anything in the Standards can safely be neglected in instruction. Neglecting material will leave gaps in student skill and understanding and may leave students unprepared for the challenges of a later grade.

Students should spend the large majority\(^1\) of their time on the major work of the grade (■). Supporting work (□) and, where appropriate, additional work (○) can engage students in the major work of the grade.\(^2,3\)

### MAJOR, SUPPORTING, AND ADDITIONAL CLUSTERS FOR GRADE 6

Emphases are given at the cluster level. Refer to the Common Core State Standards for Mathematics for the specific standards that fall within each cluster.

Key: ■ Major Clusters □ Supporting Clusters ○ Additional Clusters

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.RP.A</td>
<td>Understand ratio concepts and use ratio reasoning to solve problems.</td>
</tr>
<tr>
<td>6.NS.A</td>
<td>Apply and extend previous understandings of multiplication and division to divide fractions by fractions.</td>
</tr>
<tr>
<td>6.NS.B</td>
<td>Compute fluently with multi-digit numbers and find common factors and multiples.</td>
</tr>
<tr>
<td>6.NS.C</td>
<td>Apply and extend previous understandings of numbers to the system of rational numbers.</td>
</tr>
<tr>
<td>6.EE.A</td>
<td>Apply and extend previous understandings of arithmetic to algebraic expressions.</td>
</tr>
<tr>
<td>6.EE.B</td>
<td>Reason about and solve one-variable equations and inequalities.</td>
</tr>
<tr>
<td>6.EE.C</td>
<td>Represent and analyze quantitative relationships between dependent and independent variables.</td>
</tr>
<tr>
<td>6.G.A</td>
<td>Solve real-world and mathematical problems involving area, surface area, and volume.</td>
</tr>
<tr>
<td>6.SP.A</td>
<td>Develop understanding of statistical variability.</td>
</tr>
<tr>
<td>6.SP.B</td>
<td>Summarize and describe distributions.</td>
</tr>
</tbody>
</table>

### HIGHLIGHTS OF MAJOR WORK IN GRADES K–8

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>K–2</td>
<td>Addition and subtraction – concepts, skills, and problem solving; place value</td>
</tr>
<tr>
<td>3–5</td>
<td>Multiplication and division of whole numbers and fractions – concepts, skills, and problem solving</td>
</tr>
<tr>
<td>6</td>
<td>Ratios and proportional relationships; early expressions and equations</td>
</tr>
<tr>
<td>7</td>
<td>Ratios and proportional relationships; arithmetic of rational numbers</td>
</tr>
<tr>
<td>8</td>
<td>Linear algebra and linear functions</td>
</tr>
</tbody>
</table>

### REQUIRED FLUENCIES FOR GRADE 6

<table>
<thead>
<tr>
<th>Fluency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.NS.B.2</td>
<td>Multi-digit division</td>
</tr>
<tr>
<td>6.NS.B.3</td>
<td>Multi-digit decimal operations</td>
</tr>
</tbody>
</table>

\(^1\) At least 65% and up to approximately 85% of class time, with Grades K–2 nearer the upper end of that range, should be devoted to the major work of the grade. For more information, see Criterion #1 of the K–8 Publishers’ Criteria for the Common Core State Standards for Mathematics www.achievethecore.org/publisherscriteria.

\(^2\) Refer also to criterion #3 in the K–8 Publishers’ Criteria for the Common Core State Standards for Mathematics www.achievethecore.org/publisherscriteria.

\(^3\) Note, the critical areas are a survey of what will be taught at each grade level; the major work is the subset of topics that deserve the large majority of instructional time during a given year to best prepare students for college and careers.
**WHERE TO FOCUS**

**GRADE 6**

**CCSS**

**Depends on similarity ideas from geometry to show that slope can be defined and then used to show that a linear equation has a graph which is a straight line and conversely.**

- Listed here are a subset of those designated as major in the assessment consortia's draft documents.

- * Indicates a cluster that is well thought of as a part of a student's progress to algebra, but that is currently not designated as major by the assessment consortia in their draft materials. Apart from the one asterisked exception, the clusters listed here are a subset of those designated as major in the assessment consortia’s draft documents.

- **** Depends on similarity ideas from geometry to show that slope can be defined and then used to show that a linear equation has a graph which is a straight line and conversely.

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An important subset of the major work in grades K–8 is the progression that leads toward middle school algebra.

<table>
<thead>
<tr>
<th>K</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know number names and the count sequence</td>
<td>Represent and solve problems involving addition and subtraction</td>
<td>Represent problems involving addition and subtraction</td>
<td>Represent &amp; solve problems involving multiplication and division</td>
<td>Use the four operations with whole numbers to solve problems</td>
<td>Understand the place value system</td>
<td>Apply and extend previous understandings of multiplication and division to divide fractions by fractions</td>
<td>Apply and extend previous understanding of operations with fractions to add, subtract, multiply, and divide rational numbers</td>
<td>Work with radical and integer exponents</td>
</tr>
<tr>
<td>Count to tell the number of objects</td>
<td>Understand and apply properties of operations and the relationship between addition and subtraction</td>
<td>Add and subtract within 20</td>
<td>Understand properties of multiplication and the relationship between multiplication and division</td>
<td>Generalize place value understanding for multi-digit whole numbers</td>
<td>Use equivalent fractions as a strategy to add and subtract fractions</td>
<td>Apply and extend previous understandings of numbers to the system of rational numbers</td>
<td>Understand the connections between proportional relationships, lines, and linear equations**</td>
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<tr>
<td>Compare numbers</td>
<td>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from</td>
<td>Work with addition and subtraction equations</td>
<td>Measure length in standard units</td>
<td>Multiply &amp; divide within 100</td>
<td>Use place value understanding and properties of operations to perform multidigit arithmetic</td>
<td>Use properties of operations to generate equivalent expressions</td>
<td>Analyze proportional relationships and use them to solve real-world and mathematical problems</td>
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<tr>
<td>Work with numbers 11–19 to gain foundations for place value</td>
<td>Understand place value</td>
<td>Relate addition and subtraction to length</td>
<td>Develop understanding of fractions as numbers</td>
<td>Solve problems involving the four operations, and identify &amp; explain patterns in arithmetic</td>
<td>Extend understanding of fraction equivalence and ordering</td>
<td>Reason about and solve one-variable equations and inequalities</td>
<td>Define, evaluate, and compare functions</td>
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<tr>
<td></td>
<td>Use place value understanding and properties of operations to add and subtract</td>
<td>Use place value understanding and properties of operations to add and subtract</td>
<td>Use place value understanding and properties of operations to perform multidigit arithmetic</td>
<td>Solve problems involving multiplication and division to multiply and divide fractions</td>
<td>Extend understanding of fraction equivalence and ordering</td>
<td>Represent and analyze quantitative relationships between dependent and independent variables</td>
<td>Use functions to model relationships between quantities</td>
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<tr>
<td></td>
<td>Measure lengths indirectly and by iterating length units</td>
<td>Measure and estimate lengths in standard units</td>
<td>Develop understanding of fractions as numbers</td>
<td>Solve problems involving measurement and estimation of intervals of time, liquid volumes, &amp; masses of objects</td>
<td>Build fractions from unit fractions by applying and extending previous understandings of operations</td>
<td>Reason about and solve one-variable equations and inequalities</td>
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