

Introduction to the PARCC Model Content Frameworks for Mathematics

Resource Materials

[The PARCC Model Content Frameworks for Mathematics](#) is a document produced by the Partnership for Assessment of Readiness for College and Careers (PARCC) with the intent of creating a link between the *Common Core State Standards* (CCSS) and the upcoming PARCC assessment. As such, it is an invaluable tool when districts are considering the implementation of the CCSS. In its current form, the Frameworks is particularly informative for teachers and curriculum writers for grades 3 through 8.¹ While it does not claim to be an exhaustive document, it offers useful examples of such things as opportunities to connect the Standards for Mathematical Content with the Standards for Mathematical Practice, key content advances from previous grades, and expected fluencies for a grade. Additionally, the document offers a breakdown of content clusters with respect to the instructional emphasis they should receive for a grade level. These three categories, Major, Supporting, and Additional, are also indicative of the amount of emphasis clusters will receive on the PARCC summative assessment.

RIDE has developed a summary of the essential content of the Frameworks for grades 3-8 into a table format. This resource is **not** meant to supplant the formal document which is rich in narrative and description, but to provide educators with a reference sheet for these grades. The intention of this document is to inspire educators to take a deeper dive into the Frameworks and use it to better inform design of curriculum, instruction, and assessment.

¹ To date, the [High School](#) section of the Frameworks is not as comprehensive in its guidance. It is expected that this portion of the Frameworks will offer increased guidance to high school educators. A release of the High School section is anticipated by August 2012.

Grade 5 Mathematics Content Emphasis by Cluster Chart

Based on analysis of the Common Core State Standards for Mathematics, the *PARCC Model Content Frameworks* has prioritized clusters of standards at each grade level. These categories, Major, Supporting, and Additional, are based on the depth of the ideas contained in the clusters and the time needed to master these ideas. This is not to say that any cluster can be ignored during instruction for this would produce gaps in student learning. Furthermore, all CCSS standards are eligible for inclusion on the PARCC summative assessment. Suggestions for how concepts in the Supporting Clusters can be linked to the Major Clusters are provided in the full Frameworks document.

Domain	Major Clusters	Supporting Clusters	Additional Clusters
<i>Operations & Algebraic Thinking</i>			<ul style="list-style-type: none"> -Write and interpret numerical expressions -Analyze patterns and relationships
<i>Number & Operations in Base Ten</i>	<ul style="list-style-type: none"> -Understand the place value system -Perform operations with multi-digit whole numbers and with decimals to hundredths 		
<i>Number & Operation - Fractions</i>	<ul style="list-style-type: none"> -Use equivalent fractions as a strategy to add and subtract fractions -Apply and extend previous understandings of multiplication and division to multiply and divide fractions 		
<i>Measurement & Data</i>	<ul style="list-style-type: none"> -Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition 	<ul style="list-style-type: none"> -Convert like measurement units within a given measurement system -Represent and interpret data 	
<i>Geometry</i>			<ul style="list-style-type: none"> -Graph points on the coordinate plane to solve real-world and mathematical problems -Classify two dimensional figures into categories based on their properties

Grade 5 PARCC Model Content Frameworks Summary Chart

Examples of Key Advances from Previous Grade	Fluency Expectations or Examples of Culminating Standards	Examples of Major Within-Grade Dependencies	Examples of Opportunities for Connections among Standards, Clusters, or Domains	Examples of Opportunities for In-Depth Focus	Examples of Opportunities for Connecting Mathematical Content and Mathematical Practices
Integrate decimal fractions into the place value system and begin to extend algorithms for multi-digit operations to decimals (5.NBT.1-4) and (5.NBT.7)	5.NBT.5	Multiplying a quantity by a fraction is exemplified by the understanding that a digit in one place represents 1/10 of what it represents in the place to the left (5.NBT.1) and (5.NF.4)	Multiplying fractions extends understanding of the operation of multiplication (5.NF.4a) and (5.NF.5)	5.NBT.1	Work with multi-digit division (5.NBT.6) connects to (MP.1,6,7,8)
Apply understanding of fraction equivalence as a strategy to add and subtract fractions			Conversions within the metric system connect to place value work (5.MD.1) and (5.NBT.1)	5.NBT.6	Patterns in multiplication (5.NBT.2) and division connect to (MP.1,2,8)
Apply and extend previous understanding of multiplication and division of whole numbers to fractions (5.NF.3-4)				5.NF.2	Work with volume (5.MD.5) connects to (MP.5,6,8)
Extend concepts of whole number division to two digit divisors (5.NBT.6)				5.NF.4	
Extend geometric measurement concepts to include volume (5.MD.3-5)				5.MD.5	
Extend understanding of number lines to the coordinate plane (5.G.1-2)					