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 8 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
The Number System		-Know that there are numbers that are not rational, and approximate them by rational numbers	
Expressions & Equations	-Work with radicals and integer exponents -Understand the connections between proportional relationships, lines, and linear equations -Analyze and solve linear equations and pairs of simultaneous equations		
Functions	-Define, evaluate, and compare functions	-Use functions to model relationships between quantities	
Geometry	-Understand congruence and similarity using physical models, transparencies, or geometry software -Understand and apply the Pythagorean theorem		-Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres
Statistics & Probability		-Investigate patterns of association in bivariate data	

Grade 8 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
Connect previous work with proportional relationships, unit rate, and graphing to lines, linear equations, and functions	**8.EE.7**	Work with congruence and similarity **(8.G.1-5)** is a prerequisite to justifying connections between proportional relationships, lines, and linear equations **(8.EE.5-6)**	Work in **(8.SP.1-3)** can enhance work with proportional and linear relationships	**8.EE.5**	**(MP.8)** connects to repeating decimal work and some equation work
Extend understanding of number systems to include irrationals	**8.G.9**	Consult the Frameworks for guidance on non-linear functions		**8.EE.7**	Work with the Pythagorean theorem present opportunities for argument **(MP3)**
				8.EE.8	Equation work connects to **(MP.7)**
				8.F.2	Modeling opportunities **(MP.4)** permeate grade 8 content
				8.G.7	Work with scientific notation **(8.EE.4)** connects to **(MP.5)**