

Accelerated Middle School Math Sample 2

This sample plan illustrates how courses can be designed in order to accelerate identified students through middle school math in order to allow them to begin earning Carnegie credit in middle school. There are many variations from which districts and schools can choose.

The pathway identified in this sample consists of two courses:

Accelerated 7th Grade Math: This course combines the Common Core State Standards for Mathematics (CCSSM) for Grade 7 with approximately half of the CCSSM for Grade 8 into the first course. The “Year at a Glance” on page 2 illustrates how the standards might be bundled by units to teach the standards included in this course. The sample plan is based on 170 days.

8th Grade Algebra I: This course combines the remaining CCSSM for Grade 8 (those not included in the Grade 7 course described above) with the CCSSM for Algebra I as listed in the PARCC Model Content Frameworks. The high school standards included in this course are the same standards students would work to achieve in grade 9. The “Year at a Glance” on page 3 provides one sample way the standards might be bundled into units over the course of the school year (approximately 170 days).

Considerations:

- This is a sample plan and is not the only pathway available to districts and/or schools. Other sample plans for accelerating middle school mathematics can be found in the Library on the LDE website under [Year-Long Planning](#). Create pathways which fit the needs of the school and/or district being served.
- Define procedures at the district and/or school level to determine which students are eligible for (or are most likely to succeed in) an accelerated program. These procedures should be outlined for students, parents, and teachers.
- Create guidelines at the district and/or school level to decide whether students will continue in the accelerated pathway. Communicate this information to parents, students, and teachers.
- Districts and/or schools shall be mindful of the Carnegie Credit and Flexibility policy in [Bulletin 741, § 2314](#) in order to award Carnegie credit for Algebra I.

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8
Operations of Rational Numbers	Linear Expressions, Equations, and Inequalities	Ratio and Proportional Reasoning	Transformations	Probability	Geometric Figures and Relationships	Area, Volume, and Surface Area	Rational & Irrational Numbers with Integer Exponents
30 days	20 days	20 days	25 days	15 days	20 days	20 days	20 days
Standards for Mathematical Practice included in all units							
7.NS.A.1	7.EE.A.1	7.RP.A.1	8.G.A.1	7.SP.A.1	7.G.A.2	7.G.A.3	8.EE.A.1
7.NS.A.2	7.EE.A.2	7.RP.A.2	8.G.A.2	7.SP.A.2	7.G.B.4	7.G.B.4	8.EE.A.2
7.NS.A.3	7.EE.B.4	7.RP.A.3	8.G.A.3	7.SP.B.3	7.G.B.5	7.G.B.6	8.EE.A.3
7.EE.B.3	8.EE.C.7	7.G.A.1	8.G.A.4	7.SP.B.4	8.G.A.5	8.G.C.9	8.EE.A.4
				7.SP.C.5			8.NS.A.1
				7.SP.C.6			8.NS.A.2
				7.SP.C.7			
				7.SP.C.8			
Major Clusters		Supporting Clusters			Additional Clusters		
RP – Ratio and Proportional Reasoning (7. 1, 2, 3) NS – The Number System (7. 1, 2, 3) EE – Expressions and Equations (7. 1, 2, 3, 4) (8. 1, 2, 3, 4, 5, 6, 7, 8) F – Function (8. 1, 2, 3) G – Geometry (8. 1, 2, 3, 4, 5, 6, 7, 8)		SP – Statistics and Probability (7. 1, 2, 5, 6, 7, 8) (8. 1, 2, 3, 4) NS – The Number System (8. 1, 2) F – Functions (8. 4, 5)			G – Geometry (7. 1, 2, 3, 4, 5, 6) (8. 9) SP – Statistics and Probability (7. 3, 4)		

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11
Pythagorean Theorem	Functions	Solving Single-Variable Equations and Inequalities	Linear Equations and Inequalities	Systems of Linear Equations and Inequalities	Linear and Exponential Functions	Arithmetic with Polynomials	Solving Quadratic Equations	Quadratic, Radical, and Piecewise Functions	Bivariate Statistics: Linear, Quadratic, and Exponential	Univariate Statistics
10 days	25 days	15 days	10 days	15 days	10 days	10 days	20 days	20 days	20 days	15 days
Standards for Mathematical Practice included in all units										
8.G.B.6	8.EE.B.5	A-CED.A.1	A-REI.D.10	8.EE.C.8	A-SSE.B.3c	A-SSE.A.1	A-SSE.A.2	F-IF.B.4	8.SP.A.1	N-Q.A.3
8.G.B.7	8.EE.B.6	A-CED.A.4	A-REI.D.12	A-CED.A.3	A-CED.A.1	A-APR.A.1	A-REI.A.1	F-IF.B.5	8.SP.A.2	S-ID.A.1
8.G.B.8	8.F.A.1	A-REI.B.3	N-Q.A.1	A-REI.C.5	A-CED.A.2		A-REI.B.4	F-IF.B.6	8.SP.A.3	S-ID.A.2
8.EE.A.2	8.F.A.2	N-Q.A.1	F-IF.C.7a	A-REI.C.6	F-LE.A.1		A-SSE.B.3a	A-REI.11	8.SP.A.4	S-ID.A.3
8.NS.A.2	8.F.A.3	N-RN.B.3		A-REI.D.12	F-LE.A.2		A-SSE.B.3b	A-APR.B.3	S-ID.C.7	
	8.F.B.4				F-LE.A.3			F-IF.C.7a	S-ID.C.8	
	8.F.B.5				F-LE.B.5			F-IF.C.8a	S-ID.C.9	
	F-IF.A.1							F-IF.C.9	F-BF.A.1a	
	F-IF.A.2							F-IF.C.7b	N-Q.A.1	
	F-IF.A.3							F-BF.B.3	N-Q.A.2	
	F-IF.B.5								S-ID.B.5	
	F-IF.C.9								S-ID.B.6	
	F-BF.B.3									
Major Clusters				Supporting Clusters				Additional Clusters		
8.EE – Expressions and Equations (1, 2, 3, 4, 5, 6, 7, 8) 8.F – Function (1, 2, 3) 8.G – Geometry (1, 2, 3, 4, 5, 6, 7, 8) A-SSE Seeing Structure in Expressions (1, 2) A-APR Arithmetic with Polynomials and Rational Exp (1) A-CED Creating Equations (1, 2, 3, 4) A-REI Reasoning with Equations and Inequalities (1, 3, 4, 5, 6, 10, 11, 12) F-IF Interpreting Functions (1, 2, 3, 4, 5, 6) S-ID Interpreting Categorical and Quantitative Data (7,8,9)				8.NS – The Number System (1, 2) 8.F – Functions (4, 5) 8.SP – Statistics and Probability (1, 2, 3, 4) N-Q Quantities (1, 2, 3) A-SSE Seeing Structure in Expressions (3) A-APR Arithmetic with Polynomials and Rational Exp (3) F-IF Interpreting Functions (7, 8, 9) F-BF Building Functions (1) F-LE Linear, Quadratic, and Exponential Models (1,2,3,5) S-ID Interpreting Categorical & Quantitative Data (5, 6)				8.G – Geometry (9) N-RN The Real Number System (3) F-BF Building Functions (3) S-ID Interpreting Categorical & Quantitative Data (1, 2, 3)		