Accelerated Middle School Math Sample 1

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 all of the Common Core State Standards for Mathematics (CCSSM) for Grade 7 and Grade 8 into one course. The "Year at a Glance" on page 2 illustrates how the standards might be bundled by units to achieve the goal of teaching all CCSSM for Grade 7 and Grade 8 in one course. The sample plan is based on 170 days.

8th Grade Algebra I: This course is the same as the Algebra I course typical ninth grade students would take. 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	Unit 9	Unit 10	Unit 11	Unit 12
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	Pythagorean Theorem	Linear Functions	Systems of Equations	Bivariate Statistics: Linear
15 days	20 days	20 days	15 days	15 days	10 days	10 days	15 days	10 days	20 days	10 days	10 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	8.G.B.6	8.EE.B.5	8.EE.C.8	8.SP.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	8.G.B.7	8.EE.B.6		8.SP.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	8.G.B.8	8.F.A.1		8.SP.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	8.EE.A.2	8.F.A.2		8.SP.A.4
				7.SP.C.5			8.NS.A.1	8.NS.A.2	8.F.A.3		
				7.SP.C.6			8.NS.A.2		8.F.B.4		
				7.SP.C.7					8.F.B.5		
				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	Unit 12
Solving Single-Variable Equations and Inequalities	Linear Equations and Inequalities	Systems of Linear Equations and Inequalities	Evaluating Functions	Linear and Exponential Functions	Arithmetic with Polynomials	Solving Quadratic Equations	Quadratic Functions	Radical Functions	Piecewise Functions	Bivariate Statistics: Linear, Quadratic, and Exponential	Univariate Statistics
12 days	10 days	15 days	15 days	10 days	15 days	20 days	20 days	14 days	15 days	12 days	12 days
Standards for Mathematical Practice included in all units											
A-CED.A.1	A-REI.D.10	A-CED.A.3	F-IF.A.1	A-SSE.B.3c	A-SSE.A.1	A-SSE.A.2	F-IF.B.4	F-IF.B.4	A-REI.11	S-ID.C.7	N-Q.A.3
A-CED.A.4	A-REI.D.12	A-REI.C.5	F-IF.A.2	A-CED.A.1	A-APR.A.1	A-REI.A.1	F-IF.B.5	F-IF.B.5	F-IF.B.4	S-ID.C.8	S-ID.A.1
A-REI.B.3	N-Q.A.1	A-REI.C.6	F-IF.A.3	A-CED.A.2		A-REI.B.4	F-IF.B.6	F-IF.B.6	F-IF.C.7b	S-ID.C.9	S-ID.A.2
N-Q.A.1	F-IF.C.7a	A-REI.D.12	F-IF.B.5	F-LE.A.1		A-SSE.B.3a	A-APR.B.3	F-IF.C.7b		F-BF.A.1a	S-ID.A.3
N-RN.B.3			F-IF.C.9	F-LE.A.2		A-SSE.B.3b	F-IF.C.7a	F-IF.C.9		N-Q.A.1	
			F-BF.B.3	F-LE.A.3			F-IF.C.8a			N-Q.A.2	
				F-LE.B.5			F-IF.C.9			S-ID.B.5	
							F-BF.B.3			S-ID.B.6	

Major Clusters	Supporting Clusters	Additional Clusters
A-SSE Seeing Structure in Expressions (1, 2)	**N-Q** Quantities (1, 2, 3)	
A-APR Arithmetic with Polynomials and Rational Expressions (1)	**A-SSE** Seeing Structure in Expressions (3)	
A-CED Creating Equations (1, 2, 3, 4)	**A-APR** Arithmetic with Polynomials and Rational Expressions (3)	**N-RN** The Real Number System (3)
A-REI Reasoning with Equations and Inequalities (1, 3, 4, 5, 6, 10, 11, 12)	**F-IF** Interpreting Functions (7, 8, 9)	**F-BF** Building Functions (3)
F-IF Interpreting Functions (1, 2, 3, 4, 5, 6)	**F-BF** Building Functions (1)	**S-ID** Interpreting Categorical & Quantitative Data (1, 2, 3)
S-ID Interpreting Categorical and Quantitative Data (7, 8, 9)	**F-LE** Linear, Quadratic, and Exponential Models (1, 2, 3, 5)	
	S-ID Interpreting Categorical & Quantitative Data (5, 6)	