Accelerated Middle School Math Sample 3

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 three courses:

Accelerated 6th Grade Math: This course combines all of the Common Core State Standards for Mathematics (CCSSM) for Grade 6 and some Grade 7 CCSSM 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 the standards included for this course. The sample plan is based on 170 days.

Accelerated 7th Grade Math: The second course in this pathway combines the Grade 7 CCSSM which were not included in the sixth grade course and some CCSSM for Grade 8. The "Year at a Glance" on page 3 illustrates how the standards might be bundled by units to achieve the goal of teaching the CCSSM included in this course. The sample plan is based on 170 days.

8th Grade Algebra I: The third course in the pathway combines the remaining Grade 8 CCSSM and all of the CCSSM for Algebra I identified by the PARCC Model Content Frameworks. The "Year at a Glance" on page 4 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.

Accelerated 6th Grade Math – Year at a Glance (SAMPLE)

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15
Adding and Subtracting Decimals	Multiplying and Dividing Decimals	Dividing Fractions	Equations and Inequalities	Order of Operations Including Whole-Number Exponents	Area and Surface Area	Ratios and Rates	Scale Drawings to Support Ratios and Rates	Equivalent Expressions	Univariate Statistics	Rational Numbers: Introduction of Negative	Rational Numbers and the Coordinate Plane	Adding and Subtracting Rational Numbers	Multiplying and Dividing Rational Numbers	Writing Equations in Two Variables
10 days	10 days	10 days	15 days	12 days	10 days	15 days	10 days	12 days	10 days	15 days	10 days	10 days	10 days	10 days
Standards for Mathematical Practice included in all units														
6.NS.B.3	6.NS.B.2	6.NS.A.1	6.EE.A.2a	6.EE.A.1	6.G.A.1	6.RP.A.1	7.RP.A.1	6.EE.A.2b	6.SP.A.1	6.NS.C.5	6.NS.C.6b	7.NS.A.1	7.NS.A.2	6.EE.C.9
	6.NS.B.3		6.EE.B.5	6.EE.A.2c	6.G.A.4	6.RP.A.2	7.G.A.1	6.EE.A.3	6.SP.A.2	6.NS.C.6a	6.NS.C.6c	7.NS.A.3	7.NS.A.3	6.RP.A.3a
			6.EE.B.6	6.G.A.2		6.RP.A.3		6.EE.A.4	6.SP.A.3	6.NS.C.6c	6.NS.C.8		7.EE.B.3	6.RP.A.3b
			6.EE.B.7					6.NS.B.4	6.SP.A.4	6.NS.C.7	6.G.A.3			
			6.EE.B.8						6.SP.A.5					
			6.EE.C.9											

Major Clusters	Supporting Clusters	Additional Clusters
RP – Ratio and Proportional Reasoning (6. 1, 2, 3) (7. 1) **NS** – The Number System (6. 1, 5, 6, 7, 8) (7. 1, 2, 3) **EE** – Expressions and Equations (6. 1, 2, 3, 4, 5, 6, 7, 8, 9) (7. 3)	**G** – Geometry (6. 1, 2, 3, 4)	**NS** – The Number System (6. 2, 3, 4) **G** – Geometry (7. 1) **SP** – Statistics and Probability (6. 1, 2, 3, 4, 5)

Sample plan adapted from plans created by Kyle Falting and Britton Kilpatrick (Universal Achievement, LLC)

Mathematics
Accelerated 7th Grade Math – Year at a Glance (SAMPLE)

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14
Solving Linear Equations and Inequalities in One Variable	Linear Expressions	Proportional Reasoning: Coordinate Plane	Proportional Reasoning: Percents	Probability	Population Statistics	Geometric Constructions and Angle Relationships	Circles	Area, Volume, and Surface Area	Congruence Transformations	Similarity Transformations	Rational and Irrational Numbers	Integer Exponents	Rational and Irrational Numbers through Volume
10 days	12 days	10 days	10 days	15 days	15 days	12 days	10 days	12 days	15 days	15 days	12 days	12 days	10 days
Standards for Mathematical Practice included in all units													
7.EE.B.4	7.EE.A.1	7.RP.A.2	7.RP.A.3	7.SP.C.5	7.SP.A.1	7.G.A.2	7.G.B.4	7.G.A.3	8.G.A.1	8.G.A.3	8.EE.A.2	8.EE.A.1	8.EE.A.2
	7.EE.A.2			7.SP.C.6	7.SP.A.2	7.G.B.5		7.G.B.6	8.G.A.2	8.G.A.4	8.NS.A.1	8.EE.A.3	8.NS.A.2
				7.SP.C.7	7.SP.B.3				8.G.A.3	8.G.A.5	8.NS.A.2	8.EE.A.4	8.G.C.9
				7.SP.C.8	7.SP.B.4								

Major Clusters	Supporting Clusters	Additional Clusters
RP – Ratio and Proportional Reasoning (7. 2, 3) **EE** – Expressions and Equations (7. 1, 2, 4) (8. 1, 2, 3, 4) **G** – Geometry (8. 1, 2, 3, 4, 5)	**NS** – The Number System (8. 1, 2) **SP** – Statistics and Probability (7. 1, 2, 5, 6, 7, 8)	**G** – Geometry (7. 2, 3, 4, 5, 6) (8. 9) **SP** – Statistics and Probability (7. 3, 4)

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Mathematics
8th Grade Algebra I – Year at a Glance (SAMPLE)

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13
Pythagorean Theorem	Solving Linear Equations and Inequalities in One Variable	Functions and Evaluating Functions	Linear Equations and Inequalities in Two Variables	Systems of Linear Equations and Inequalities	Linear and Exponential Functions	Arithmetic with Polynomials	Solving Quadratic Equations	Quadratic and Other Polynomial Functions	Radical Functions	Piecewise-Defined Functions	Univariate Statistics	Bivariate Statistics: Linear, Quadratic, and Exponential
10 days	15 days	15 days	15 days	15 days	15 days	10 days	15 days	15 days	12 days	10 days	10 days	12 days
Standards for Mathematical Practice included in all units												
8.EE.A.2	8.EE.C.7	8.F.A.1	8.EE.B.5	8.EE.C.8	A-CED.A.1	A-SSE.A.1	A-SSE.A.2	F-IF.B.5	F-IF.B.4	A-REI.D.11	N-Q.A.2	S-ID.C.7
8.G.B.6	A-CED.A.1	8.F.A.2	8.EE.B.6	A-CED.A.3	A-SSE.B.3c	A-APR.A.1	A-REI.A.1	F-IF.B.6	F-IF.B.5	F-IF.B.4	N-Q.A.3	S-ID.C.8
8.G.B.7	A-CED.A.4	8.F.B.5	8.F.A.3	A-REI.C.5	F-LE.A.1		A-SSE.B.3a	A-SSE.B.3a	F-IF.B.6	F-IF.C.7b	S-ID.A.1	S-ID.C.9
8.G.B.8	A-REI.B.3	F-IF.A.1	8.F.B.4	A-REI.C.6	F-LE.A.2		A-SSE.B.3b	A-SSE.B.3b	F-IF.C.7b		S-ID.A.2	8.SP.A.1
8.NS.A.2	N-Q.A.1	F-IF.A.2	A-CED.A.2	A-REI.D.12	F-LE.A.3			A-APR.B.3	F-IF.C.9		S-ID.A.3	8.SP.A.2
8.G.C.9	N-RN.B.3	F-IF.A.3	A-REI.D.10		F-LE.B.5			F-IF.C.7a	F-BF.B.3			8.SP.A.3
		F-IF.B.5	A-REI.D.12					F-IF.C.8a				8.SP.A.4
		F-BF.A.1a	N-Q.A.1					F-IF.C.9				N-Q.A.1
		F-BF.B.3	F-IF.C.7a					F-BF.B.3				S-ID.B.5
												S-ID.B.6

Major Clusters	Supporting Clusters	Additional Clusters
8.EE – Expressions and Equations (2, 5, 6, 7, 8) **8.F** – Functions (1, 2, 3, 4, 5) **8.G** – Geometry (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 (2) **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)

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