#### Please Note:

All standards in the state course description are designed to be learned by the end of the course. This guide represents a recommended time line and sequence to be used voluntarily by teachers for planning purposes. Specific questions regarding when content will actually be addressed in a specific course are best answered by the individual teacher.

Teachers may use a wide variety of instructional materials throughout their course. The Possible Resources listed may include the district adopted instructional resource or supplemental resources that align to the topic and/or standard. These Possible Resources provide sample problems that align to the topic/standard.

### **Publisher Resource:**

<u>Pearson</u> (select your grade and course level and use your active directory)

### **Other Course Supplemental Resources:**

Khan Academy (Algebra 1; does not support Internet Explorer)

Math Nation (Clever – use your active directory; does not support Internet Explorer)

#### **FSA Portal**

Algebra 1 EOC Test Item Specifications Algebra 1 FSA Computer-Based Practice Test Answer Key

PARCC (Partnership for Assessment of Readiness for College and Careers) - Mathematics Practice Tests with Answer Keys

All standards in the state course description are designed to be learned by the end of the course. This guide represents a recommended time line and sequence to be used voluntarily by teachers for planning purposes. Specific questions regarding when content will actually be addressed in a specific course is best answered by the individual teacher.

	Week	Major Concepts / Topics	Possible Resources
Quarter 1 Aug 12 – Oct 11	1 8/12 - 8/16	<ul> <li>1.1 Operations on real numbers</li> <li>1.2 Solving linear equations</li> <li>1.3 Solving equations with variables on both sides</li> </ul>	Operations on Numbers – <u>Khan Academy</u> Solving Equations – <u>Khan Academy</u> Solving Linear Equations With Variables on Both Sides – <u>Khan Academy</u>
	2 8/19 – 8/23	<ul> <li>1.3 Solving equations with variables on both sides</li> <li>1.4 Literal equations and formulas</li> <li>1.5 Solving inequalities in one variable</li> <li>1.6 Compound inequalities</li> </ul>	Solving Linear Equations With Variables on Both Sides – <u>Khan Academy</u> Solving Inequalities – <u>Khan Academy</u> Compound Inequalities – <u>Khan Academy</u>
	3 8/26 – 8/30	<ul> <li>1.6 Compound inequalities</li> <li>1.7 Absolute value equations and inequalities</li> <li>Mathematical modeling in 3 acts</li> <li>STEM project</li> </ul>	Compound Inequalities – <u>Khan Academy</u> Absolute Value Function – <u>Khan Academy</u>
	4 9/3 – 9/6	<ul> <li>Labor Day Holiday – 9/2</li> <li>R &amp; A</li> <li>2.1 Slope intercept form</li> </ul>	Slope Intercept Form – <u>Khan Academy</u>
	5 9/9 – 9/13	<ul> <li>2.1 Slope intercept form</li> <li>2.2 Point slope form</li> <li>2.3 Standard form</li> </ul>	Slope Intercept Form – <u>Khan Academy</u> Point Slope Form – <u>Khan Academy</u> Standard Form – <u>Khan Academy</u>
	6 9/16 – 9/20	<ul> <li>2.3 Standard form</li> <li>Mathematical modeling in 3 acts</li> <li>STEM project</li> <li>R &amp; A</li> </ul>	Standard Form – <u>Khan Academy</u>
	7 9/23 – 9/27	<ul> <li>R &amp; A</li> <li>3.1 Relations and Functions</li> <li>3.2 Linear Functions</li> <li>3.3 Transforming linear functions</li> </ul>	Functions – <u>Khan Academy</u> Linear Functions – <u>Khan Academy</u>
	8 9/30 – 10/4	<ul> <li>3.3 Transforming linear functions</li> <li>3.4 Arithmetic sequences</li> <li>3.5 Scatter plots and lines of best fit</li> <li>3.6 Analyzing lines of fit</li> </ul>	Arithmetic Sequences – <u>Khan Academy</u>

All standards in the state course description are designed to be learned by the end of the course. This guide represents a recommended time line and sequence to be used voluntarily by teachers for planning purposes. Specific questions regarding when content will actually be addressed in a specific course is best answered by the individual teacher.

	3.6 Analyzing lines of fit	
9	Mathematical modeling in 3 acts	
10/7 – 10/1	STEM project	
	• R&A	

All standards in the state course description are designed to be learned by the end of the course. This guide represents a recommended time line and sequence to be used voluntarily by teachers for planning purposes. Specific questions regarding when content will actually be addressed in a specific course is best answered by the individual teacher.

	Week	Major Concepts / Topics	Possible Resources
Quarter 2 Oct 15 – Dec 20	1 10/15 - 10/18	<ul> <li>4.1 Solving systems by graphing</li> <li>4.2 Solving systems by substitution</li> </ul>	Solving Systems by Substitution – <u>Khan</u> <u>Academy</u>
	2 10/21 - 10/25	<ul> <li>4.2 Solving systems by substitution</li> <li>4.3 Solving systems by elimination</li> <li>4.4 Linear inequalities</li> </ul>	Solving Systems by Substitution – <u>Khan</u> <u>Academy</u> Solving Systems by Elimination – <u>Khan</u> <u>Academy</u> Linear Inequalities – Khan Academy
	3 10/28 – 11/1	<ul> <li>4.4 Linear inequalities</li> <li>4.5 Systems of linear inequalities</li> <li>Mathematical modeling in 3 acts</li> <li>STEM project</li> </ul>	
	4 11/4 - 11/8	<ul> <li>R &amp; A</li> <li>5.1 Absolute value function</li> <li>5.2 Piece-wise functions</li> </ul>	Absolute Value and Piece-wise Functions – Khan Academy
	5 11/12 – 11/15	<ul> <li>Veterans Day 9/11</li> <li>5.2 Piece-wise functions</li> <li>5.3 Step functions</li> </ul>	Piece-wise Functions – <u>Khan Academy</u> Step Functions – Khan Academy
	6 11/18 – 11/22	<ul> <li>5.4 Transformations of piece-wise functions</li> <li>R &amp; A</li> </ul>	Transformations of Piece-wise Functions – Khan Academy
	7 11/25 – 11/26	<ul> <li>Thanksgiving Holiday 11/27 - 11/29</li> <li>Mathematical modeling in 3 acts</li> <li>STEM project</li> </ul>	
	8 12/2 – 12/6	<ul> <li>6.1 Rational exponents and properties of exponents</li> <li>6.2 Exponential functions</li> </ul>	Exponents – <u>Khan Academy</u> Exponential Functions – Khan Academy
	9 12/9 – 12/13	<ul> <li>6.3 Exponential growth and decay</li> <li>R &amp; A</li> </ul>	Exponential Growth and Decay – <u>Khan</u> <u>Academy</u>
	10 12/16 – 12/20	EXAM WEEK	

All standards in the state course description are designed to be learned by the end of the course. This guide represents a recommended time line and sequence to be used voluntarily by teachers for planning purposes. Specific questions regarding when content will actually be addressed in a specific course is best answered by the individual teacher.

	Week	Major Concepts / Topics	Possible Resources
		6.4 Geometric sequences	Geometric Sequences – <u>Khan</u>
	1	6.5 transformations of exponential functions	Academy
	1/6-1/10	Mathematical modeling in 3 acts	Transformations of Exponential
			Functions – Khan Academy
	2	STEM project	Adding and Subtracting Polynomials –
	2 1/13 – 1/17	• R&A	Khan Academy
		7.1 Adding and subtracting polynomials	
		Martin Luther King Jr. Holiday 1/20	Multiplying Polynomials – <u>Khan</u>
	3	• 7.2 Multiplying polynomials	Academy
	1/21 – 1/24	• 7.3 Multiplying special cases	Multiplying Special Cases – <u>Khan</u>
		• 7.4 Factoring polynomials	Academy
		Teacher Inservice 1/31	Factorization – <u>Khan Academy</u>
	4 1/27 – 1/30	• 7.4 Factoring polynomials	Factoring Polynomials – <u>Khan</u>
Quarter 3		• R&A	Academy
Jan 6 – Mar 12		• 7.5 Factoring	
	5 2/3 – 2/7	• 7.5 Factoring	Factorization – <u>Khan Academy</u>
		• 7.6 Factoring	Factoring Special Cases – <u>Khan</u>
		• 7.7 Factoring special cases	Academy
		Mathematical modeling in 3 acts	Quadratics – <u>Khan Academy</u>
	6 2/10 - 2/14	STEM project	Features and Forms of Quadratics –
		• R&A	Khan Academy
		8.1 Key features of quadratic functions	
	7 2/17 – 2/21	Presidents Day Holiday 2/17	Features and Forms of Quadratics –
		8.1 Key features of quadratic functions	Khan Academy
		8.2 Quadratic functions in vertex form	Quadratics – <u>Khan Academy</u>
		8.3 Quadratic functions in standard form	Quadratic Functions in Vertex Form –
			Khan Academy
			Quadratic Functions in Standard Form
			– <u>Khan Academy</u>

All standards in the state course description are designed to be learned by the end of the course. This guide represents a recommended time line and sequence to be used voluntarily by teachers for planning purposes. Specific questions regarding when content will actually be addressed in a specific course is best answered by the individual teacher.

2/	8 /24 – 2/28	<ul> <li>8.3 Quadratic functions in standard form</li> <li>8.4 Modeling with quadratic functions</li> <li>Mathematical modeling in 3 acts</li> <li>STEM project</li> </ul>	Quadratic Functions in Standard Form – <u>Khan Academy</u> Graphing Quadratics – <u>Khan Academy</u>
3	9 3/2 - 3/6	<ul> <li>R &amp; A</li> <li>9.1 Solving quadratic equations</li> <li>9.2 Solving quadratic equations by factoring</li> </ul>	Solving Quadratic Equations by Factoring – <u>Khan Academy</u>
3,	10 3/9 – 3/12	<ul> <li>9.3 Rewriting radical expressions</li> <li>9.4 Solving quadratic equations using square roots</li> <li>9.5Completing the square</li> </ul>	Rewriting Radical Expressions – <u>Khan</u> <u>Academy</u> Solving Quadratics by Taking Square Roots – <u>Khan Academy</u> Completing the Square – <u>Khan</u> <u>Academy</u>

All standards in the state course description are designed to be learned by the end of the course. This guide represents a recommended time line and sequence to be used voluntarily by teachers for planning purposes. Specific questions regarding when content will actually be addressed in a specific course is best answered by the individual teacher.

	Week	Major Concepts / Topics	Possible Resources
	1	SPRING BREAK – NO SCHOOL	
	3/16 – 3/20		
		9.5 Completing the square	Completing the Square – <u>Khan</u>
	2	9.6 The quadratic formula and the discriminant	<u>Academy</u>
	3/23 – 3/27	Mathematical modeling in 3 acts	
		STEM project	
		• R&A	Radicals – <u>Khan Academy</u>
	3	10.1 Square root function	Introduction to Square Roots –
	3/30 - 4/3	10.2 Cube root function	Khan Academy
		10.3 Analyzing functions graphically	Introduction to Cube Roots –
			Khan Academy
		10.4 Translations of functions	
Quarter 4	4 4/6 - 4/9	<ul> <li>10.5 Compressions and stretches of functions</li> </ul>	
Mar 23 – May 27		10.6 Operations of functions	
,		STEM Project	
		Holiday 4/10	
	5 4/14 – 4/17	Holiday 4/13	
		• R&A	
		11.1 Analyzing data displays	
	6 4/20 – 4/24	11.2 Comparing data sets     11.2 Laterementing the sets of data displayer	
		• 11.3 Interpreting the sets of data displays	
		• 11.4 Standard deviation	
		11.5 Iwo way frequency tables	
		IViatnematical modeling in 3 acts	Linear Exponential and
		SIEM project	Quadratic Models – Khan
	4/2/ – 5/1		Academy
		8.5 Linear exponential and quadratic models	

All standards in the state course description are designed to be learned by the end of the course. This guide represents a recommended time line and sequence to be used voluntarily by teachers for planning purposes. Specific questions regarding when content will actually be addressed in a specific course is best answered by the individual teacher.

8 5/4 – 5/8	Standards review
9 5/11 – 5/15	Standards review
10 5/18 – 5/22	Standards review
11 5/25 – 5/27	Standards review

All standards in the state course description are designed to be learned by the end of the course. This guide represents a recommended time line and sequence to be used voluntarily by teachers for planning purposes. Specific questions regarding when content will actually be addressed in a specific course is best answered by the individual teacher.