



East Carter Co. R-II School District  
Course Scope and Sequence

**Course: Algebra 1**

# OF DAYS	TOPICS
14	<p>Chapter 1: Solving Linear Equations</p> <p>Major Topic: Understand Solving Linear Equations</p> <p>Concepts: Solve simple and multi-step equations. Describe how to solve equations. Analyze the measurements used to solve a problem and judge the level of accuracy appropriate for the solution. Apply equation-solving techniques to solve real-life problems.</p>
10	<p>Chapter 2: Solving Linear Inequalities</p> <p>Major Topic: Understand Solving Linear Inequalities</p> <p>Concepts: Solve simple and multi-step inequalities. Describe how to solve inequalities. Compare and contrast solving inequalities with solving equations. Apply techniques for solving inequalities to solve real-life applications.</p>
19	<p>Chapter 3: Graphing Linear Functions</p> <p>Major Topic: Understand Graphing Linear Functions</p> <p>Concepts: Identify the graph of a linear function. Graph linear functions written in different forms. Describe the characteristics of a function. Explain how a transformation affects the graph of a linear function.</p>
13	<p>Chapter 4: Writing Linear Functions</p> <p>Major Topic: Understand Writing Linear Functions</p> <p>Concepts: Determine the slope given ordered pairs, a graph, or a context. Write the equation of a line in different forms. Interpret scatter plots and analyze lines of fit. Write a function that represents an arithmetic sequence to solve a real-life problem.</p>

11	<p>Chapter 5: Solving Systems of Linear Equations</p> <p>Major Topic: Understand Solving Systems of Linear Equations</p> <p>Concepts: Identify a system of linear equations.</p> <p>Describe different methods for solving systems of linear equations.</p> <p>Analyze systems of linear equations and decide what solution method is most efficient.</p> <p>Predict whether a system of linear equations has one solution, no solution, or infinitely many solutions.</p>
17	<p>Chapter 6: Exponential Functions and Sequences</p> <p>Major Topic: Understand Exponential Functions and Sequences</p> <p>Concepts: Identify and use properties of exponents.</p> <p>Describe exponential functions.</p> <p>Analyze data, a graph, or a context to determine whether it represents exponential growth or decay.</p> <p>Model using an exponential function or a geometric sequence.</p>
13	<p>Chapter 7: Polynomial Equations and Factoring</p> <p>Major Topic: Understand Polynomial Equations and Factoring</p> <p>Concepts: Classify polynomials by degree and number of terms.</p> <p>Add, subtract, multiply, and divide polynomials.</p> <p>Solve polynomial equations.</p> <p>Factor polynomials and use factoring to solve real-life problems.</p>
15	<p>Chapter 8: Graphing Quadratic Functions</p> <p>Major Topic: Understand Graphing Quadratic Functions</p> <p>Concepts: Identify characteristics of quadratic functions.</p> <p>Describe how to graph quadratic functions in different forms.</p> <p>Find zeros of functions using intercept form.</p> <p>Choose an appropriate function to model data.</p>
18	<p>Chapter 9: Solving Quadratic Equations</p> <p>Major Topic: Understand Solving Quadratic Equations</p> <p>Concepts: Simplify expressions using properties of radicals.</p> <p>Describe different methods for solving quadratic equations.</p> <p>Solve quadratic equations.</p> <p>Solve nonlinear systems of equations graphically and algebraically.</p>
10	<p>Chapter 10: Radical Functions and Equations</p> <p>Major Topic: Understand Radical Functions and Equations</p> <p>Concepts: Identify domains and ranges of radical functions.</p> <p>Graph square root and cube root functions.</p> <p>Solve radical equations.</p> <p>Find inverses of relations and functions.</p>

11	Chapter 11: Data Analysis and Displays Major Topic: Understand Data Concepts: Interpret data displays. Describe the shapes of data distributions. Represent data in different ways. Analyze data.
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### **Course Description**

In this course, students will be taught the Missouri Learning Standards for Mathematics. We will use a balance of procedural fluency, conceptual understanding, and real-life applications. Students develop conceptual understanding through exploration (inquiry-based learning), continue that development in lessons while gaining procedural fluency during concept and skills practice, and tie it all together with real-life examples. Every lesson set reflects this balance, giving students the rigorous practice they need to be college- and career-ready.