East Carter Co. R-II School District

Course Scope and Sequence

# Course: Integrated Math

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

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

| | |
|---|---|
| 11 | Chapter 11: Data Analysis and Displays<br>Major Topic: Data Analysis and Displays<br>Concepts: Interpret data displays.<br>Describe the shapes of data distributions.<br>Represent data in different ways.<br>Analyze data. |

## 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.