



# BRENTWOOD MIDDLE SCHOOL

## 7<sup>th</sup> Grade Course Catalog (2024-2025)

### Language Arts

Students in seventh grade language arts engage in rigorous application and reinforcement of grammar skills and a variety of writing strategies and techniques. Students compose essays in which they support their ideas with evidence from various genres or informational texts. Reading includes novels, short stories, poetry, nonfiction, and informational text. Vocabulary study incorporates both grade-level words and academic vocabulary; strategies include using context clues and building understanding of multiple meaning words through analogies.

### Social Studies

Seventh grade students will explore the social, cultural, geographical, political and technological changes that occurred after the fall of the Roman Empire. Students will also study the Middle Ages, including the Middle East, Africa, China, Japan and Europe. There is a heavy emphasis on western civilization in Europe during the Renaissance and Reformation. Students will compare and contrast the history and geography of civilizations that were developing concurrently throughout these continents during medieval times. Students will examine the growth in economic interactions among civilizations as well as the exchange of ideas, beliefs, technologies, and commodities. Seventh grade students will end the year by examining the Mesoamerican and Andean civilizations, and the age of European exploration and colonization. Appropriate informational texts and primary sources will be used in order to deepen the understanding of how these civilizations influence the modern world.

### Science

Seventh grade science is a broad introduction to the study of life and chemical sciences. Topics include: the structure, composition, and behavior of matter, atmospheric concentration and processes, cells, bodily organization, human body systems, cellular processes including photosynthesis and cellular respiration, genetics and heredity, and adaptations. The processes of data analysis, providing evidential support of scientific claims, and communicating their findings to a specific audience are strengthened through numerous cooperative peer group interactions and hands-on laboratory activities throughout the school year. Students will end seventh grade science with a better understanding of how scientists complete scientific processes, including cross-curricular techniques beneficial in Language Arts, Mathematics, History, and the Arts.

### MATHEMATICS

#### 7th Grade Math\*

Students will use problem-solving strategies and technology to master Tennessee state standards for the 7th grade. These skills include working with rational numbers, negative numbers, and percentages, solving equations, working with proportions, understanding geometric figures, and using techniques of statistics and probability. Word

problems are deeply embedded within the course. Students will also begin applying linear relationships to real world scenarios. Students will be expected to persevere in problem solving, reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others, as outlined by state standards, in preparation for the 7th grade TNReady test.

*\*Scientific (non-graphing) calculators are required. We recommend the TI-30XS MultiView calculator, or any other calculator in the TI-30 family. A Texas Instruments brand calculator is not required but it is highly recommended to maximize use in the classroom. \**

### **8th Grade Math\***

*Prerequisites: Successful completion of 7th Grade math with a yearly average of 85% or above; 6<sup>th</sup> grade math teacher recommendation.*

This is a pre-algebra course that students take prior to the year they take Algebra 1. This course uses problem solving situations, physical models and appropriate technology to extend algebraic thinking and engage student reasoning. This course will focus on 8<sup>th</sup> grade state of Tennessee math standards which includes a study of the real number system as well as solving multi-step equations. Word problems are deeply embedded within the course, and students use algebraic concepts in order to solve them. In addition to solving equations, students will explore functions, writing equations, graphing linear equations, solving and graphing systems of equations, geometry, and statistics. Students will be expected to persevere in problem solving, reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others as outlined by the state standards in preparation of the 8<sup>th</sup> grade TNReady test.

*\*Scientific (non-graphing) calculators are required. We recommend the TI-30XS MultiView calculator, or any other calculator in the TI-30 family. A Texas Instruments brand calculator is not required but it is highly recommended to maximize use in the classroom. \**

### **7th Grade Honors Algebra 1\*\***

*Prerequisites: Successful completion of 8th Grade math with a yearly average of 85% or above; 85% on the Algebra 1 placement test; 6th grade teacher recommendation.*

Algebra 1 is an honors level, high school math course that uses problem solving situations, physical models and appropriate technology to extend algebraic thinking and engage student reasoning. Word problems are deeply embedded within the course and students use algebraic concepts in order to solve them. Problem solving and making mathematical connections to real world problems are critical to a student's success in this course. Concepts emphasized in the course: solving linear equations and inequalities, writing and graphing linear equations, writing and graphing systems of equations and inequalities, writing and graphing nonlinear functions (including but not limited to: absolute value, piecewise, quadratic, and exponential functions), analyzing transformations of a parent function, analyzing data using one-variable and two-variable statistics, solving quadratic functions, and simplifying rational expressions. Students will be expected to persevere in problem solving, reason abstractly and quantitatively, construct viable arguments, and critique the reasoning of others as outlined by state standards. Students enrolled in Algebra I must take the Algebra I EOC TNReady test. Students earn one high school math credit by completing Algebra I Honors. This credit will be calculated into a student's high school GPA, and the credit will appear as a letter grade on their high school transcript.

*\*\*Graphing calculators required. We recommend the TI-84 Plus CE calculator. A Texas Instruments brand calculator is not required but it is highly recommended to maximize use in the classroom. \**

***\*\*Academic Classes Note: INDIVIDUAL TEACHER REQUESTS WILL NOT BE GRANTED. \*\****