

THUNDER RIDGE MIDDLE SCHOOL

COURSE GUIDE

2022-2023

6<sup>th</sup> – 8<sup>th</sup> GRADES



Dream Big \* Inspire Everyone \* Create a Roadmap \* Believe in Yourself \* Achieve \* Work Hard



## LANGUAGE ARTS

**6<sup>th</sup> Grade Language Arts** Students will read and comprehend literary and informational text, including poetry, short stories, novels, and articles. Students will read to determine topic, main idea, author's purpose, and theme. Writing content will focus on summary, informational, argumentative, narrative, and an organized short-constructed response. Students will learn appropriate research techniques, how to determine the reliability of sources, and an introduction to the process of source citation.

**6<sup>th</sup> Grade Honors Language Arts** This honors class has the same areas of focus and course of studies as 6<sup>th</sup> grade language arts. Students work at an accelerated pace, the content is condensed, and independence and self-initiative are expected. Advanced novels will be required reading. Mastery of writing conventions is practiced and expected. Outside-the-box ideas are encouraged in student writing, as well as the use of sophisticated word choices and strengthening of voice. Students will practice and master the art of writing five paragraph essays. In addition to interest, students requesting this course should have a strong body of evidence in language arts, including teacher input, attendance, habits of mind and PARCC/CMAS scores in the upper quadrant of the "Meets" or "Exceeds" category in reading and writing.

## MATH

**Math 6** As students transition to middle school mathematics, they will build on their understanding of numbers from elementary school and begin to learn the abstract components of mathematics. Math content will focus on four critical areas: (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing an understanding of division of fractions and extending the notion of number to the system of rational number, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing an understanding of statistical thinking. This work will lay the foundation for the focus on proportional reasoning in seventh grade.

**Math 6/7** Math 6/7 and Math 7/8 are a two-year compacted course sequence that provides three years of mathematics content in two years, preparing students for Algebra 1 in grade 8. Math 6/7 students study all topics from Math 6 and extend three main concepts to blend with Math 7. The concept of ratio and rate is extended to proportional relationships, the concept of rational numbers and integers is extended to operations with integers and rational numbers, and the study of statistical

thinking is extended to statistical inference based on samples. The compacted nature of the course will require students to be comfortable and proficient in learning math at an accelerated pace. Placement in Math 6/7 is determined using a body of evidence to support students' readiness for success in this course.

## **SCIENCE**

**6<sup>th</sup> Grade Science** Sixth grade science focuses on the overarching theme of systems. Topics include cells, human body (interaction of systems and homeostasis), ecology, natural resources, water, and the dynamic earth. Students engage in critical thinking by making claims and using evidence and scientific reasoning to support these claims. This is expressed both orally and in written format. STEM (the integration of science, technology, engineering, and math) projects are incorporated throughout the year.

## **SOCIAL STUDIES**

**6<sup>th</sup> Grade Social Studies** Sixth grade social studies focuses on the Western Hemisphere. Students will become familiar with economic systems, forms of government, history and geography. With a primary goal of advancing all students' nonfiction reading and writing proficiency, teachers provide a balance of digital, print, primary sources, and hands-on critical thinking activities. The course incorporates an overview of current world events to understand the importance of being a global citizen.



## LANGUAGE ARTS

**7<sup>th</sup> Grade Language Arts** Students will read texts to determine central ideas or themes, compare/contrast, analyze author’s point of view, and evaluate arguments made by others. They will express their thinking through argumentative, expository, and narrative writing. Written responses to literature will focus on using details from the text to support ideas. Students will use conventions of English to express their ideas concisely both in writing and in class discussions.

**7<sup>th</sup> Grade Honors Language Arts** This honors class is the same course of study as 7<sup>th</sup> grade language arts with more rigorous discussion and an accelerated pace in reading and writing assignments. Students will manipulate writing conventions and standard format to achieve a high level of creativity. Students should be committed to independent reading both in school and at home. In addition to interest, students requesting this course should have a strong body of evidence in language arts, including teacher input, attendance, habits of mind, and PARCC/CMAS scores in the upper quadrant of “Meets” or “Exceeds” category in reading and writing.

## MATH

**Math 7** Seventh grade students will build on their work with rational numbers and algebraic thinking from sixth grade as they move into deeper and more complex math concepts. Content will focus on four critical areas, including (1) developing understanding of and application of proportional relationships; (2) developing understanding of operations with rational numbers and working with expressions and linear equations; (3) solving problems involving geometric ideas of scale, area, surface area and volume with two- and three-dimensional shapes; and (4) drawing inferences about populations based on samples. These concepts will lay the foundation for the algebraic work with linear functions studied in eighth grade.

**Math 7/8** Students who have successfully completed Math 6/7 continue in this two-year compacted course sequence preparing them for Algebra 1 in grade 8. Students will complete their study of Math 7 topics not covered in Math 6/7, including working with expressions and linear equations and the geometric study of two- and three-dimensional shapes. These concepts extend to the Math 8 topics of linear equations and the Pythagorean Theorem, respectively. The full content of Math 8 will be covered in this course. The compacted nature of the course will require students to be comfortable and proficient learning math at an accelerated pace.

## **SCIENCE**

**7<sup>th</sup> Grade Science** Seventh grade science focuses on change over time in relation to the earth and life history. Specific topics of study include Earth History, Evolution, Properties of Matter (Basic Chemistry), and Climate. Throughout the school year, students will complete STEM oriented project based learning activities. Students are required to engage in critical thinking and arguing using scientific evidence both in discussion and in written form.

**7<sup>th</sup> Grade Honors Science** Honors Science 7 has the same areas of focus and course of studies as 7<sup>th</sup> grade science. Students in this course will have the opportunity to delve deeper into the 7<sup>th</sup> grade science curriculum. This course involves more rigorous discussion, more complex reading and writing, and more challenging assessments. Students in this course are expected to independently push themselves to take intellectual risks and to synthesize and effectively communicate complex ideas. Students should be committed to independent reading both in school and at home. In addition to interests, students requesting this course should have a strong body of evidence in science, including teacher input, attendance, habits of mind, and PARCC/CMAS scores in the upper quadrant of “Meets” or “Exceeds” category in reading, writing, and math.

## **SOCIAL STUDIES**

**7<sup>th</sup> Grade Social Studies** This is geographically based course focused on eastern world history (Mesopotamia, ancient Egypt, Japan, Africa, India, Greece, Rome and China). The focus of academic content is connecting the lasting impact of ancient civilizations to the world today. The course incorporates an overview of current world events to compare and contrast past and present civilizations. Students examine these areas of study through the lenses of history, civics, economics, and geography.

**7<sup>th</sup> Grade Honor Social Studies** Honors Social Studies 7 has the same area of focus and course of studies. However, this course is designed to provide students with a greater depth of required content at an accelerated pace to enrich their knowledge of the ancient, medieval, and modern world. Students are expected to independently demonstrate effective communication, critical thinking, questioning, and evaluating their own learning in class. Strategies for rigorous practices include but are not limited to Socratic Seminars, writing DBQs (document-based question), and expanding on academic and historic vocabulary. In addition to interest, students requesting this course should have a strong body of evidence in social studies, including teacher input, attendance, habits of mind and PARCC/CMAS scores in the upper quadrant of “Meets” or “Exceeds” category in reading and writing.



## LANGUAGE ARTS

**8<sup>th</sup> Grade Language Arts** Students will examine, through thematic units, a range of literary and artistic expression by analyzing fictional and nonfictional texts for the purpose of writing narrative, informational, and argumentative texts. Students will also identify elements of literature, read to compare/contrast works, improve their oral communication skills, and analyze informational materials for relevance and accuracy. Students will grow to recognize the interdependence of oral language, literature, and written language in a context of social and cultural expression.

**8<sup>th</sup> Grade Honors Language Arts** This honors class is the same course of study as the 8<sup>th</sup> grade language arts class with an accelerated pace in reading and writing assignments. Students will interact with texts of greater complexity as well as learn advanced essay writing skills. Independence and self-initiative are expected for this class. Students requesting this course should have a strong body of evidence in language arts, including teacher input, attendance, habits of mind and PARCC/CMAS scores in the upper quadrant of “Meets” or “Exceeds” category in reading and writing, as well as, student interest.

## MATH

**Math 8** Students begin a serious study of algebra with the learning of linear functions. The focus shifts from the study of numbers to the abstract application of understanding arithmetic. The content will focus on three critical areas including: (1) formulating and reasoning about expressions and equations, including modeling bivariate data with a linear equation, solving linear equations, and working with systems of linear equations; (2) developing and understanding of the concept of a function, and using functions to describe quantitative relationships; and (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem. This work will lay the foundation for the success in a high school Algebra 1 course.

**Algebra** Algebra 1 formalizes and extends the mathematics that students learned in Math 6, 7, and 8. The major components of study include: (1) using equations and inequalities to model real-life quantities and manipulating them to highlight quantities of interest while focusing on the underlying

structures of equations and inequalities; (2) understanding of the concept of a function, the use of function notations, and the structures of exponential functions and how they compare and contrast with linear functions; (3) working with quadratic functions through a structural perspective and in comparison to linear and exponential functions. These concepts lay the foundations for analytic geometry subsequent geometry courses, and for study with different function types in algebra 2 and other advanced math courses. This course is equivalent to the Algebra 1 course taught at CCSD high schools. Students who have successfully completed Math 7/8 are eligible for this class. Due to the content of this class, TI-84 Plus or TI-Nspire graphing calculators are used regularly and it is helpful if students have their own.

## **SCIENCE**

**8<sup>th</sup> Grade Science** The focus of this course is the theme of energy. Topics include forms of energy and energy transformation, matter and chemical reactions, waves (sound, seismic, ocean, and electromagnetic), force and motion, weather, genetics, and Earth, Moon & Sun relationships. Throughout the school year, students will complete STEM oriented project based learning activities and are required to engage in critical thinking and arguing from evidence, both through speech and in written form.

**8<sup>th</sup> Grade Honors Science** Honors Science has the same area of focus and topics as 8<sup>th</sup> grade science. This course involves discussion that is more rigorous and more complex reading and writing as well as more challenging assessments. Students in this course are expected to take intellectual risks and synthesize and effectively communicate complex ideas. Students requesting this course should have a strong body of evidence in science, including teacher input, attendance, habits of mind and PARCC/CMAS scores in the upper quadrant of “Meets” or “Exceeds” category in reading, writing, and math, as well as, student interest.

## **SOCIAL STUDIES**

**8<sup>th</sup> Grade Social Studies** This is a United States history and government class. The curriculum covers the history of the U.S. from the American Revolution through the Reconstruction period. Primary documents from our nation’s history, such as the Declaration of Independence, the U.S Constitution and the Bill of Rights are analyzed. Curriculum also includes American geography, personal financial literacy and economics. Current events, Socratic seminars and discussions of public issues are included.

**8<sup>th</sup> Grade Honors Social Studies** This course is designed to instruct students in a wider range of required content to prepare them for rigorous academic work in high school social studies. This class covers content and practical knowledge of U.S. history; practice in critical thinking skills; analysis of primary documents; and experience in communicating effectively. The curriculum includes American Geography, Personal Financial Literacy and Economics. Students should be prepared to participate daily in class through pre-class assignments, reading, and should invest additional time for independent preparatory background knowledge. Students requesting this course should have a strong body of evidence in social studies, including teacher input, attendance, habits of mind and PARCC/CMAS scores

in the upper quadrant of “Meets” or “Exceeds” category in reading and writing, as well as, student interest.