Middle School Course Catalog

2022-2023

List of Courses Offered

A. History/Social Science

- MS World History and Geography: Ancient Civilizations (6th)
- MS World History and Geography: Medieval and Early Modern Times (7th)
- MS United States History and Geography (8th)

B. English

- English Language Arts 6
- English Language Arts 7
- English Language Arts 8

C. Mathematics

- Math 6
- Math 7
- Math 8
- Algebra 1
- Algebra 2
- Geometry
- Mathematics 1
- Mathematics 2
- Mathematics
- Pre-Algebra

D. Science

- 6th Grade Integrated Science
- 7th Grade Integrated Science
- 8th Grade Integrated Science

E. Electives

- Career Explorations I
- Career Explorations 2
- Career Explorations 3
- Digital Literacy
- Health-7th Grade
- Keyboarding and Applications
- Online Learning & Digital Citizenship
- PE 6th Grade
- PE 7th Grade
- PE 8th Grade
- Spanish 1
- Spanish 2

Middle School Courses – 6th-8th Grade

Category A: History/Social Science

MS World History and Geography: Ancient Civilizations

Providing sixth-grade students with an opportunity to learn the diverse history that has shaped our world, this course delves into the evolution of civilizations from the rise of ancient empires to the beginning of the Middle Ages. Comprehensive and organized by region, this two-semester middle school course helps students understand the Earth's physical and human diversity. Middle school students enrolled in this exciting and informative course will investigate the reasons for the development of ancient societies, the effects of the emerging civilizations, their problems, and the progress made during different periods of social, economic, and political development. Over the course of two semesters, students will analyze the effects of political conflicts and social issues on the development and interdependence among early civilizations and the contributions that tied them with the modern world.

MS World History and Geography: Medieval and Early Modern Times

Providing students with an opportunity to learn the diverse history that has shaped our world, this course delves into the evolution of civilization from the beginning of the Middle Ages through the 21st century. Middle school students enrolled in this exciting and informative course will investigate the development of medieval societies, the effects of the Renaissance and the Reformation, and the progress made during different periods of revolution, industrialization, urbanization, and reform. Over the course of two semesters, students will analyze the effects of political conflicts and social issues on the continuing development and interdependence among nations in the modern world.

MS United States History and Geography (8th Grade)

Offering an interactive and comprehensive overview of American history, this course engages and inspires students to learn about the rich and diverse history of America's native peoples, early European colonization and settlement in America, and the creation of a new nation through the American Revolution. Middle school students

enrolled in this course will closely examine major changes brought about by the nation's reconstruction, industrialization, urbanization, and progressive reforms and will consider the implications each of these events had on the expansion of the United States' global influence through modern times. Over the course of two semesters, interesting course content encourages students to think carefully about the challenges and opportunities facing the United States in the 21st century.

Category B: English

English Language Arts 6

This course eases students' transition to middle school with engaging, age-appropriate literary and informational reading selections. Students learn to read critically, analyze texts, and cite evidence to support ideas. They read essential parts of literary and informational texts and explore a full unit on Lewis Carroll's classic novel Through the Looking Glass. Vocabulary, grammar, and listening skills are sharpened through lessons that give students explicit modeling and ample practice. Students also engage in routine, responsive writing based on texts they have read. In extensive, process-based writing lessons, students write topical essays in the narrative, informative, analytical, and argumentative formats. In this full-year course, students develop a mastery of reading, writing, and language arts skills.

English Language Arts 7

This middle school course's students grow as readers, writers, and thinkers. With engaging literary and informational texts, students learn to think critically, analyze an author's language, and cite evidence to support ideas. Students complete an in-depth study of Jack London's classic novel White Fang and read excerpts from other stories, poetry, and nonfiction. Explicit modeling and ample opportunities for practice help students sharpen their vocabulary, grammar, and listening skills. Students also respond routinely to texts they have read. In extensive, process-based writing lessons, students write topical essays in the narrative, informative, analytical, and argumentative formats. In this full-year course, students develop a mastery of reading, writing, and language arts skills.

English Language Arts 8

In this course, students build on their knowledge and blossom as thoughtful readers and clear, effective writers. A balance of literary and informational texts engage students throughout the course in reading critically, analyzing texts, and citing evidence to support claims. Students sharpen their vocabulary, grammar, and listening skills through lessons designed to provide explicit modeling and ample opportunities to practice. Students also write responses to texts they have read and use more extensive, process-based lessons to produce full-length essays in narrative, informative, analytical, and argumentative formats. In this full-year course, students develop a mastery of reading, writing, and language arts skills.

Category C: Math

Math 6

This course begins by connecting ratio and rate to multiplication and division, allowing students to use ratio reasoning to solve a wide variety of problems. Students further apply their understanding of multiplication and division to explain the standard procedure for dividing fractions. This course builds upon previous notions of the number system to now include the entire set of rational numbers. Students begin to understand the use of variables as they write, evaluate, and simplify expressions. They use the idea of equality and properties of operations to solve one-step equations and inequalities. In statistics, students explore different graphical ways to display data. They use data displays, measures of center, and measures of variability to summarize data sets. The course concludes with students' reasoning about relationships among shapes to determine area, surface area, and volume.

Math 7

This course begins with an in-depth study of proportional reasoning, during which students utilize concrete models such as bar diagrams and tables to increase and develop a conceptual understanding of rates, ratios, proportions, and percentages. Students’ number fluency and understanding of the rational number system are extended as they perform operations with signed rational numbers embedded in

real-world contexts. In statistics, students develop meanings for representative samples, measures of central tendency, variation, and the ideal representation for comparisons of given data sets. Students develop an understanding of both theoretical and experimental probability. Throughout the course, students build fluency in writing expressions and equations that model real-world scenarios. They apply their understanding of inverse operations to solve multi-step equations and inequalities. Students build on their proportional reasoning to solve problems about scale drawings by relating the corresponding lengths between objects. The course concludes with a geometric analysis of angle relationships, area, and volume of both two- and three-dimensional figures.

Math 8

The course begins with a unit on input-output relationships that builds a foundation for learning about functions. Students make connections between verbal, numeric, algebraic, and graphical representations of relations and apply this knowledge to create linear functions that can be used to model and solve mathematical and real-world problems. Technology is used to build deeper connections among representations. Students focus on formulating expressions and equations, including modeling an association in bivariate data with a linear equation and writing and solving linear equations and systems of linear equations. Students develop a deeper understanding of how translations, rotations, reflections, and dilations of distances and angles affect congruency and similarity. Students develop rules of exponents and use them to simplify exponential expressions. Students extend the rules of exponents as they perform operations with numbers in scientific notation. Estimating and comparing square roots of nonperfect squares to perfect squares exposes students to irrational numbers and lays the foundation for applications such as the Pythagorean theorem, distance, and volume.

Pre-Algebra

This full-year course is designed for high school students who have completed a middle school mathematics sequence but are not yet algebra-ready. This course reviews key algebra readiness skills from the middle grades and introduces basic Algebra I work with appropriate support. Students revisit concepts in numbers and operations, expressions and equations, ratios and proportions, and basic functions. By

the end of the course, students are ready to begin a more formal high school Algebra I study.

Algebra 1

This full-year course focuses on five critical areas: relationships between quantities and reasoning with equations, linear and exponential relationships, descriptive statistics, expressions and equations, and quadratic functions and modeling. This course builds on the foundation set in middle grades by deepening students' understanding of linear and exponential functions and developing fluency in writing and solving one-variable equations and inequalities. Students will interpret, analyze, compare, and contrast functions that are represented numerically, tabularly, graphically, and algebraically. Quantitative reasoning is a common thread throughout the course as students use algebra to represent quantities and the relationships among those quantities in a variety of ways. Standards of mathematical practice and process are embedded throughout the course, as students make sense of problem situations, solve novel problems, reason abstractly, and think critically.

Algebra 2

This course focuses on functions, polynomials, periodic phenomena, and collecting and analyzing data. The course begins with a review of linear and quadratic functions to solidify a foundation for learning these new functions. Students make connections between verbal, numeric, algebraic, and graphical representations of functions and apply this knowledge as they create equations and inequalities that can be used to model and solve mathematical and real-world problems. As students refine and expand their algebraic skills, they will draw analogies among the operations and field properties of real numbers and those of complex numbers and algebraic expressions. Mathematical practices and habits of mind are embedded throughout the course, as students solve novel problems, reason abstractly, and think critically.

Geometry

This course formalizes what students learned about geometry in the middle grades with a focus on reasoning and making mathematical arguments. Mathematical reasoning is introduced with a study of triangle congruency, including exposure to formal proofs and geometric constructions. Then students extend what they have

learned to other essential triangle concepts, including similarity, right triangle trigonometry, and the laws of sines and cosines. Moving on to other shapes, students justify and derive various formulas for circumference, area, and volume, as well as cross-sections of solids and rotations of two-dimensional objects. Students then make important connections between geometry and algebra, including special triangles, slopes of parallel and perpendicular lines, and parabolas in the coordinate plane, before delving into an in-depth investigation of the geometry of circles. The course closes with a study of set theory and probability, as students apply theoretical and experimental probability to make decisions informed by data analysis.

Mathematics 1

The first in an integrated math series for high school, this course formalizes and extends middle school mathematics, deepening students' understanding of linear relationships. The course begins with a review of relationships between quantities, building from unit conversion to a study of expressions, equations, and inequalities. Students contrast linear and exponential relationships, including a study of sequences and applications such as growth and decay. Students review one-, two-, and multi-step equations, formally reasoning about each step using properties of equality. Students extend this reasoning to systems of linear equations. Students use descriptive statistics to analyze data before turning their attention to transformations and the relationship between algebra and geometry on the coordinate plane.

Mathematics 2

This course begins with a brief exploration of radicals and polynomials before delving into quadratic expressions, equations, and functions, including a derivation of the quadratic formula. Students then embark on a deep study of the applications of probability and develop advanced reasoning skills with a study of similarity, congruence, and proofs of mathematical theorems. Students explore right triangles with an introduction to right-triangle trigonometry before turning their attention to the geometry of circles and making informal arguments to derive formulas for the volumes of various solids.

Mathematics 3

This course synthesizes previous mathematical learning in four focused areas of instruction. First, students relate visual displays and summary statistics to various types of data and probability distributions, focusing on drawing conclusions from the data. Then, students begin an in-depth study of polynomial, rational, and radical functions, drawing on concepts of integers and number properties to understand polynomial operations and the combination of functions through operations. This section of instruction builds to the fundamental theorem of algebra. Students then expand the study of right-triangle trigonometry they began in Mathematics II to include non-right triangles and developing the laws of sines and cosines. Finally, students model an array of real-world situations with all the types of functions they have studied, including work with logarithms to solve exponential equations. As they synthesize and generalize what they have learned about a variety of function families, students appreciate the usefulness and relevance of mathematics in the real world.

Category D: Science

6th Grade Integrated Science

This course provides a cross-curricular approach to include the Life, Earth, Physical Sciences, and the Reading and Writing Standards for Literacy in Science and Technical Subjects. Reading in science requires an appreciation of the norms and conventions of the discipline of science, including an understanding of evidence used, attention to precision and detail, and the capacity to make and assess intricate arguments, synthesize complex information, and follow detailed procedures and accounts of events and concepts. Likewise, writing and presenting information are key means for students to assert and defend claims in science, demonstrate what they know about a concept, and convey what they have experienced, imagined, thought, and learned.

7th Grade Integrated Science

This course provides a cross-curricular approach to include the Life, Earth, Physical Sciences, and the Reading and Writing Standards for Literacy in Science and Technical Subjects. Reading in science requires an appreciation of the norms and conventions of the discipline of science, including an understanding of evidence used, attention to

precision and detail, and the capacity to make and assess intricate arguments, synthesize complex information, and follow detailed procedures and accounts of events and concepts. Likewise, writing and presenting information are key means for students to assert and defend claims in science, demonstrate what they know about a concept, and convey what they have experienced, imagined, thought, and learned.

8th Grade Integrated Science

This course provides a cross-curricular approach to include the Life, Earth, Physical Sciences, and the Reading and Writing Standards for Literacy in Science and Technical Subjects. Reading in science requires an appreciation of the norms and conventions of the discipline of science, including an understanding of evidence used, attention to precision and detail, and the capacity to make and assess intricate arguments, synthesize complex information, and follow detailed procedures and accounts of events and concepts. Likewise, writing and presenting information are key means for students to assert and defend claims in science, demonstrate what they know about a concept, and convey what they have experienced, imagined, thought, and learned.

Category E: Electives

Career Explorations I

Career Explorations I is a semester-long course designed to give middle school students an opportunity to explore various CTE subjects. Specifically, students learn about careers involving human-related services. Each of the five units introduces one particular field and explains its past, present, and future. These units include: Career Management, Introduction to Careers in Health Sciences, Hospitality and Tourism Systems, Human Services, and Consumer Services. The goal is to whet students' appetites for these careers. Students can explore that career in more detail as high school students.

Career Explorations 2

Career Explorations II is a semester-long course designed to give middle school students an opportunity to explore various CTE subjects. Specifically, students learn about careers involving various technical fields, from computers to agriculture. Each of the five units introduces one particular field and explains its past, present, and future. These units include Information Technology, Introduction to Information Support and Services, Introduction to Network Systems, Introduction to Agriculture, Food, and Natural Resources, and Introduction to STEM (Science, Technology, Engineering, and Mathematics). The goal is to whet students' appetites for these careers. Students can then explore that career in more detail as a high school student.

Career Explorations 3

Career Explorations III is a semester-long course designed to give middle school students an opportunity to explore various CTE subjects. Specifically, students learn about careers from business to hands-on career paths. Each of the five units introduces one particular field and explains its past, present, and future. These units include: Introduction to Business and Finance, Introduction to Manufacturing, Introduction to Transportation, Distribution, and Logistics, Introduction to Architecture and Construction, and Introduction to Marketing. The goal is to whet students' appetites for these careers. Students can then explore that career in more detail as a high school student.

Digital Literacy

This semester-long elective provides a foundation to understanding key applications, computing fundamentals, and online living. This course focuses on describing technology basics, including finger placement on the keyboard and the differences between hardware and software. Students describe the functions of operating systems and their utilities, identify computer networks, how they work, and computer and internet safety. Students identify different communications industries and how to use email, Microsoft Word®, PowerPoint®, and Outlook®, describe how to create spreadsheets, enter data, create graphs, and use formulas and shortcuts in spreadsheets. Additionally, students will identify the functions of PowerPoint®, digital media, intellectual property law, workplace crimes, privacy concerns, digital citizenship, and how to stay safe on social media. Required materials: *f* Students must

have access to MS Office or Office 365, including Access, Excel, Outlook, PowerPoint, and Word

Health-7th Grade

Available as either a semester or year-long course, this health offering examines and analyzes various health topics. It places alcohol use, drug use, physical fitness, healthy relationships, disease prevention, relationships, and mental health in the context of the importance of creating a healthy lifestyle. Throughout the course, students examine practices and plans they can implement in order to carry out a healthy lifestyle and the consequences they can face if they do not follow safe practices. In addition, students conduct in-depth studies in order to create mentally and emotionally healthy relationships with peers and family, as well as nutrition, sleeping, and physical fitness plans. Students also examine and analyze harassment and bullying laws. *This course takes covers issues of sex and gender identity, same-sex relationships, contraception, and other sensitive topics.*

Keyboarding and Applications

Keyboarding and Applications is a semester-long course that teaches students keyboarding skills, technical skills, effective communication skills, and productive work habits. Students learn proper keyboarding techniques. Once students have been introduced to keyboarding skills, lessons include daily practice of those skills. Students gain an understanding of computer hardware, operating systems, file management, and the Internet. In addition, students apply their keyboarding skills and create a variety of business documents, including word processing documents and electronic presentations. Required materials: ƒ Word-processing software (e.g., MS Word) ƒ Presentation software (e.g., MS PowerPoint)

Online Learning & Digital Citizenship

This one-semester course provides students with a comprehensive introduction to online learning, including how to work independently, stay safe, and develop effective study habits in virtual learning environments. Featuring direct-instruction videos, interactive tasks, authentic projects, and rigorous assessments, the course prepares students for high school by providing in-depth instruction and practice in important study skills such as time management, effective note-taking, test preparation, and

collaborating effectively online. By the end of the course, students will understand what it takes to be successful online learners and responsible digital citizens.

PE 6th Grade

Exploring fitness topics such as safe exercise and injury prevention, nutrition and weight management, consumer product evaluation, and stress management, this course equips students with the skills they need to achieve lifetime fitness. Available as either a semester or year-long course, Lifetime Fitness encourages students to assess individual fitness levels according to the five components of physical fitness: cardiovascular health, muscular strength, muscular endurance, flexibility, and body composition. Personal fitness assessments encourage students to design a fitness program to meet their individual fitness goals.

PE 7th Grade

Exploring fitness topics such as safe exercise and injury prevention, nutrition and weight management, consumer product evaluation, and stress management, this course equips students with the skills they need to achieve lifetime fitness. Available as either a semester or year-long course, Lifetime Fitness encourages students to assess individual fitness levels according to the five components of physical fitness: cardiovascular health, muscular strength, muscular endurance, flexibility, and body composition. Personal fitness assessments encourage students to design a fitness program to meet their individual fitness goals.

PE 8th Grade

Exploring fitness topics such as safe exercise and injury prevention, nutrition and weight management, consumer product evaluation, and stress management, this course equips students with the skills they need to achieve lifetime fitness. Available as either a semester or year-long course, Lifetime Fitness encourages students to assess individual fitness levels according to the five components of physical fitness: cardiovascular health, muscular strength, muscular endurance, flexibility, and body composition. Personal fitness assessments encourage students to design a fitness program to meet their individual fitness goals.

Spanish 1

Middle school students begin their introduction to Spanish with fundamental building blocks in four key areas of foreign language study: listening comprehension, speaking, reading, and writing. Each unit consists of an ongoing adventure story, a new vocabulary theme, grammar concept, numerous interactive games reinforcing vocabulary and grammar, reading and listening comprehension activities, speaking and writing activities, and multimedia cultural presentations covering major Spanish-speaking areas in Europe and the Americas.

Spanish 2

Students in middle school continue their introduction to Spanish with fundamental building blocks in four key areas of foreign language study: listening comprehension, speaking, reading, and writing. Each unit consists of an ongoing adventure story, a new vocabulary theme, and grammar concept, numerous interactive games reinforcing vocabulary and grammar, reading and listening comprehension activities, speaking and writing activities, and multimedia cultural presentations covering major Spanish-speaking areas in Europe and the Americas.